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## THE PUBLIC HIGH-SCHOOL BUILDING AT NEW HAVEN, CONN.

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The new building of the New Haven High School was begun September, 1901, and completed, with the exception of the laboratories, April, 1903. The laboratories were left incomplete until July, 1904, when they were fitted up and equipped during the summer vacation. The building was planned for 1,500 pupils. By using all the available space, however, 1,562 pupils are accommodated, the auditorium seating exactly that number.

The entire cost of the building, including ventilating, heating, furniture, and equipment, but not including the lot on which the building stands, was \$308,687.76, or \$198 per pupil. Of this amount \$42,119.19 was spent on heating and ventilating, \$19,424.26 on furniture and equipment, and \$10,000 on laboratories. Exclusive of these items, therefore, the cost of the building was \$237,143.51. Considering the fact that the building is a strictly up-to-date structure, practically fireproof, built of the best material, of good architectural effect, and containing every essential of a modern high school, with the exception of a gymnasium, it is probable that few so good buildings in the entire country have been erected at so low a cost.

From the beginning, the board of education was determined on

two things: first, that the largest possible return should be obtained from the money to be spent, and, second, that the new building should be completed within the appropriation. No pains were spared to accomplish these two objects.

Competitive plans and designs were submitted to the board, and those that seemed to meet the needs of the school most satisfactorily were accepted. The author of these plans was chosen architect for



THE NEW HAVEN HIGH SCHOOL.  
THE BOARDMAN BUILDING.  
ERECTED 1894.

the building. Although the architect assured the board that the plans could be executed within the appropriation which had been made, still the board, wishing expert opinion on this point, employed a prominent Boston schoolhouse architect to come to New Haven to give professional advice on this matter. After several hours spent in examining the plans and in conferring with the board, the advice of the expert was that the building contemplated could not be erected within the appropriation. Still, not satisfied, the board

employed several reputable and responsible local builders to figure out the exact cost of such a building as the plans and specifications of the architect called for. The result of their work was the submission of figures considerably under the appropriation. On the strength of this, the specifications were published and competitive bids called for. The lowest bids were adopted, and the building was erected and completed within the appropriation.



THE NEW HAVEN HIGH SCHOOL. THE NEW BUILDING.  
ERECTED 1901-1903.

The Boardman Manual High-School building stands at the right of the new building and at right angles to it. Upon the completion of the latter the two buildings were connected by a passage way and the two schools consolidated into the New Haven High School. Dr. J. P. Cushing is head-master, and Mr. Charles L. Kirschner director of manual training.

The following table shows the cost of high-school buildings recently erected in New England. The information given in the table is doubtless reliable, as it was obtained from the offices of boards of education in the places represented. According to the table, the cost of the buildings varies from \$198 per pupil in New Haven to \$437 in Springfield. It is doubtless understood that the larger the school, the lower is the cost per pupil.

COST OF HIGH SCHOOL BUILDINGS RECENTLY ERECTED IN NEW  
ENGLAND

	Date of Erection	Cost of Building	Ventilating and Heating (Additional)	Equipment and Furniture (Additional)	Total Cost	No. of Pupils it Accommodates	Cost per Pupil
Cambridge, English....	1891	\$206,000.00	\$14,000.00	\$11,000.00	\$231,000.00	700	\$330
Lowell.....	1893	150,000.00	10,000.00	11,000.00	171,000.00	734	233
Brookline.....	1895	190,000.00	10,000.00	25,000.00	225,000.00	750	300
Fitchburg.....	1895	139,453.00	15,007.00	23,312.00	178,672.00	900	199
Somerville, English.....	1895	108,000.00	21,000.00	10,000.00	138,000.00	600	235
Cambridge, Latin.....	1897	230,000.00	20,000.00	28,000.00	278,000.00	900	309
Newton.....	1898	200,000.00	18,550.00	10,000.00	237,550.00	900	264
Holyoke.....	1898	151,962.00	20,000.00	29,600.00	201,562.00	800	252
Springfield.....	1898	.....	.....	350,000.00	.....	800	437
Lawrence.....	1900	170,500.00	14,200.00	13,800.00	207,500.00	850	244
South Boston.....	1901	300,500.00	26,500.00	21,000.00	348,000.00	840	414
Dorchester.....	1901	203,746.00	28,254.00	25,000.00	347,000.00	840	413
Worcester, South.....	1901	143,429.74	17,762.00	10,881.40	181,073.14	750	241
New Haven.....	1902	247,143.51	42,119.09	10,424.26	308,687.76	1,562	198

The New Haven High School building is of red brick. The finish is of North Carolina pine, except in the auditorium where it is of whitewood. Although, technically, it cannot be classed as a strictly fireproof building, yet for all practical purposes it should be so classed. The entire first floor is of slow-burning mill construction; the floors of all corridors are fireproof; the walls of all classrooms, stairways, and corridors are of brick; the floors of the second and third stories are provided with a fireproof preparation; the lathing is of metal, and metal ceilings are in use throughout the building. The two main stairways are located against the outside walls of the building; and all stairways terminate on the first floor in close proximity to the outside doors.

The amount spent on equipment and furniture, \$19,424.26, did not provide entirely new furniture. About half the pupils' furniture—i. e., about eight hundred desks—had been used in the old building. This was repaired, refinished, and transferred to the new building, where it has proved entirely satisfactory. In fact, in many cases it has been difficult to distinguish the old from the new. Some of the equipment of the old laboratories, also, was found suitable for use in the new building. Of the one hundred business desks in the commercial department of the new school, sixty had been used in the old. Everything else was new. This includes the teachers' furniture, the entire equipment of the auditorium, science lecture-room, reception



room, and lunch counter, and most of the equipment of the laboratories.

What has been said shows that care and economy were practiced in the erection and equipment of this building. The board felt that this course was both financially necessary and practically wise. It felt that many cities had made the mistake of erecting too expensive high-school buildings. Such buildings are often begun with enthusiasm, but without a sufficient counting of the cost until the mistake is beyond rectification. A common result is that when the expensiveness of a building is fully realized, retrenchment takes place, adequate equipment is not provided, the erection

of other needed buildings is deferred, teachers' salaries suffer, and the public becomes distrustful of school officials and the school system. It seemed much wiser to erect a plain and substantial building which would serve well local needs, would come within local means, would leave money for satisfactory equipment, would not stand in the way of the erection of other buildings, and would increase confidence in the efficiency and the usefulness of the public-school service.

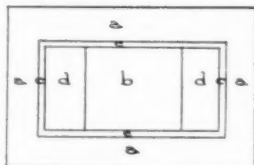


FIG. 2.—Ground Floor

*a a a a* = classrooms, etc.; *d* = inner room, auditorium; *c c c c* = corridors; *d d* = light wells

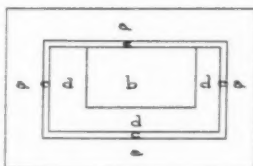


FIG. 1.—Ground Floor

*a a a a* = classrooms, etc.; *b* = inner building, auditorium; *c c c c* = corridors; *d d d* = light court

The original plan was that of a building around a hollow square, with an inner building projecting from the front into the square, as indicated in Fig. 1, above. A later step was the utilization of a portion of the light space for a larger inner building, leaving large, deep light wells reaching from the basement to the top of the building. This is indicated in

Fig. 2. Finally, still another portion of the light space was added to the inner building, as indicated in Fig. 3, below. The final plan. was that of a large, solid building with four well located light wells. Thus the plan adopted was an evolution from an original building

in the form of a hollow square. It should be said that the building is amply lighted by the exterior windows and by the large interior light wells.

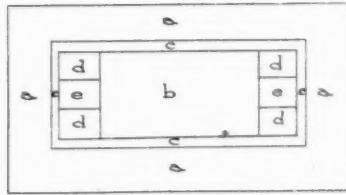


FIG. 3.—Ground Floor

*a a a a* = classrooms, etc.; *b* = auditorium; *c c c c* = corridors; *d d d d* = light wells; *e e* = lavatories

Following are the plans, in general detail, of the building. These are not, of course, architect's working plans, but they give the arrangement of the rooms with practical accuracy.

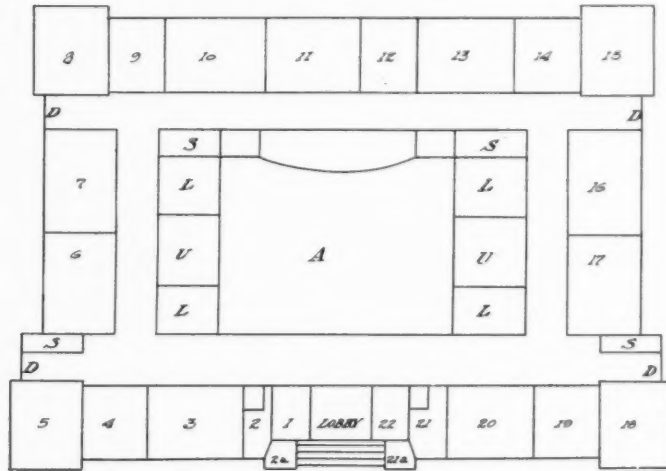


FIG. 4.—First Floor

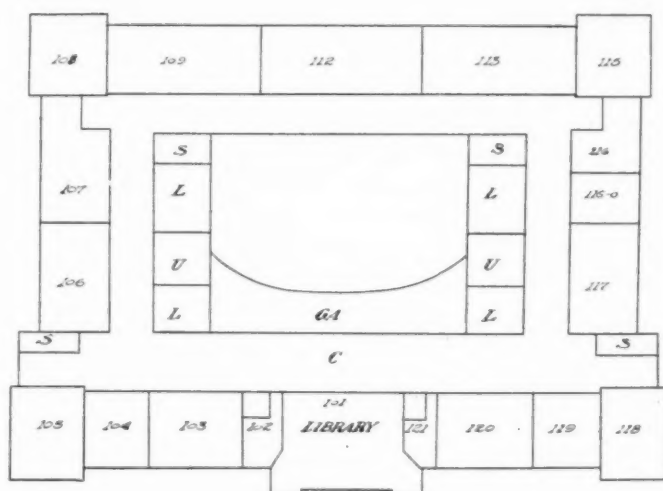


FIG. 5.—Second Floor

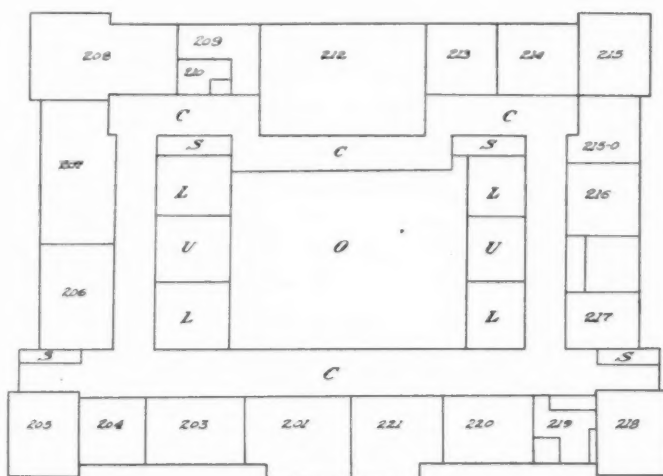


FIG. 6.—Third Floor

## EXPLANATIONS OF THE PLANS.

- 1 = reception room.  
 2 = principal's office.  
 3, 5, 6, 7, 8, 10, 11, 13, 15, 16, 17, 18, 20, 103, 105, 106, 107, 108, 117, 118, 120, 201, 203, 205, 221 = classrooms.  
 4, 9, 12, 14, 19, 104, 119, 204 = recitation rooms.  
 109, 112, 113, 115, 116, 116-0 = business department.  
 121 = lady teachers' coat- and dressing-room.  
 0 = open space above the auditorium, the latter being but two stories high.  
 20 = stenographer's room.  
 21 and 214 = clerk's room.  
 22 = emergency room.
- S, S, S, S, S, S, S, S, S = stairways.  
 D, D, D, D = outside doors.  
 A = auditorium.  
 G A = gallery of auditorium.  
 101 = library.  
 L, L, L, L, L, L, L, L = light wells.  
 U, U, U, U = lavatories.  
 102 = Men teachers' coat- and dressing-room.  
 206, 207, 208, 209, 210 = chemistry department.  
 213, 214, 215-0, 216, 217 = physics department.  
 218, 219, 220 = biological department.  
 212 = science lecture hall.  
 C, C, C, C, C, C = corridors.

The classrooms, of which there are twenty-five, vary a little in size, but nearly all of them are each  $28 \times 35$  feet, and seat forty-eight pupils. This gives a liberal floor space to each pupil, viz., about  $20\frac{1}{2}$  square feet. Every room is lighted by from four to seven large, plain windows, without transoms. In the corner rooms on the first floor the window space is from one-fourth to one-third of the floor space. In the other rooms on this floor the window space is one-fifth of the floor space. On the second and third floors, in the corner rooms the window space is about one-fourth of the floor space, while in the other rooms of these two floors the window space is one-sixth of the floor space. Less window space, of course, is needed in the upper stories than in the lower.

The windows vary in size from 9 feet 2 inches  $\times$  3 feet 7 inches to 11 feet 4 inches  $\times$  4 feet 3 inches (inside measurements).

On the first floor the height of the rooms is 15 feet; on the second and third floors it is 13 feet.

Each room is finished in gray brick from the floor to the windows, a space of about 3 feet. Above this height the finish is plain white plaster.

There are eight recitation rooms, exclusive of the recitation rooms in the special departments of science and business. Of these rooms, five are on the first floor, two on the second, and one on the third. They are  $20 \times 28$  feet in size. Each recitation room is furnished with benches provided with arm tablets, and accommodates forty pupils. On the first floor the window space in these rooms is about one-fourth of the floor space; on the second and third floors it is about one-fifth.

The corridors are 16 feet wide in the front of the building, and 14 feet on the sides and rear. They are adequately lighted from outside windows in the stairways, and from interior windows in the light wells. By referring to the plans it will be seen that the light wells do not furnish any direct light to the rear corridors, as the rear stairways intervene. These corridors are, therefore, provided with several windows opening into the classrooms and receive light from this source. Every door in the building, also, opening from classrooms and recitation rooms directly into the corridors, is provided with a glass window 25 inches square. These door windows are very useful, not only assisting in lighting the corridors, but also enabling the principal to observe the work and discipline of the rooms when passing, however hastily, along the corridors. Each of the two front light wells has eight windows, and each of the two rear wells four windows, opening directly into the corridors on each floor. On the first floor each of these windows is 9 feet  $\times$  39 inches; on the second and third floors they are 8 feet  $\times$  39 inches. On the first floor, therefore, there are 702 square feet of windows between the corridors and the light wells, and on each of the other floors 624 square feet. It is this liberal provision of window surface which gives well-lighted corridors. The corridors are finished in gray brick to a height of 7 feet 8 inches; above this, the finish is plain white plaster.

The cloakrooms are located in the corridors adjoining the classrooms, are made of wire on a framework of wood, are 5 feet wide, 7 feet high, and vary from 15 to 22 feet long. A door opens from the coatroom into the schoolroom, and another into the corridor. Each coatroom has two rows of hooks, fifty in all, and two umbrella racks.

There are four stairways, two in the front and two in the rear of the building, all inclosed by brick walls. The front stairways are 6 feet, 8 inches in width, and the rear are 8 feet. The treads are made of cement, the Ransome system, and are each  $12\frac{1}{2}$  inches wide  $\times$   $7\frac{3}{4}$  inches high. Probably by an oversight, no handrails were provided for any stairways in the building. Whether intended or not, however, the omission was unfortunate, as these rails are, beyond question, an assistance to lame pupils and a protection against falls and other similar accidents.

There are six lavatories, two on each floor. They are at opposite ends of the building, each one being between two light wells. They are  $24 \times 19\frac{1}{2}$  feet, and are abundantly lighted by the light wells on either side. Each girls' lavatory is provided with twelve closets and a large sink. The boys' lavatories have each a large sink, six closets, and nine individual urinals. The floors in all cases are of cement.

The library is located on the second floor, immediately over the vestibule and the principal's office. It is  $34 \times 50$  feet, and is lighted by five large windows in the front of the building. It is provided with bookcases on the three unlighted sides, with ten large tables 3 feet, 8 inches  $\times$  8 feet, with eleven small individual tables  $20 \times 30$  inches, and with a librarian's desk. The librarian is in charge of the room during school hours.

The auditorium occupies the main space within the four light wells in the interior of the building. The room itself is entered from the first floor and the gallery from the second floor. Its dimensions are  $67 \times 94$  feet. The seating capacity is 1,562. Of this number, the gallery seats 539, and the main floor 1,023. The light is obtained from four large windows in the light wells at the sides, and from a large area of glass in the roof, the latter being flat. The floor is slightly inclined, there being a rise of about  $3\frac{1}{2}$  feet from the front to the rear of the room. The platform,  $16 \times 40$  feet, occupies the vacant space between the rear stairways, projecting about 7 feet into the room beyond the partitions of the stairways. This is shown on the plan. The auditorium is one of the most beautiful of school halls, and is constantly admired by visitors. The color of the woodwork is cream. Over the platform is an ornate arch supported by four pillars, two on each side, in imitation of marble. The wall in the rear of the platform is plain, and in illustrated lectures the pictures are projected upon this wall, no curtain being necessary.

The science lecture-hall is on the third floor between the department of physics on one side, and that of chemistry on the other, the biological department being on the opposite side of the building on the same floor. It is 55 feet wide and  $43\frac{1}{2}$  feet deep. There are 288 seats sharply elevated in tiers, as is usual in school and college lecture-rooms. In the front of the room is a long lecture table,  $25\frac{1}{2} \times 2\frac{1}{2}$  feet, supplied with water, gas, and electricity, and furnished with a sink

and pneumatic trough. Under the elevated seats is a large, open space which has been partitioned off and converted into a storage and lumber-room for the chemical and the physical departments. An electric lantern can be placed in the rear of the room for lecture purposes. The shades for darkening the room are raised and lowered by electricity. The lecture-hall is one of the most useful rooms in the school. It was intended as a lecture-room for the science departments. It is, however, used for general lecture purpose, for class meetings, and for meetings of grade teachers. It is lighted by windows in the rear and in the roof.

The science departments are on the third floor and occupy nearly the entire floor. Ten thousand dollars was appropriated for the equipment of these departments, apportioned as follows: physical department, \$4,000; chemical department, \$4,000; biological department, \$1,500; science lecture-hall, \$500. The plans for these departments were designed by the heads of the departments—Mr. M. M. Marble, physics; Dr. B. W. McFarland, chemistry; and Miss Martha M. Kennerly, biology—by whom many unique and useful features were introduced.

The physical department occupies the following rooms (see plans): No. 213, demonstration-apparatus room, size, 20 feet 6 inches  $\times$  28 feet. No. 214, demonstration room; size, 28  $\times$  33 feet. This room is furnished with teacher's demonstration table, supplied with gas, water, and electricity, with sixty stationary lecture-room chairs, raised in tiers, having movable seats and arm tablets; with a solar lantern fitted into one of the windows at the side of the room; with an electric lantern standing on a raised platform in the rear; with three counterpoise slate blackboards,  $3\frac{1}{2} \times 9$  feet, in the front of the room; with a large electric switchboard; and with double shades for the windows, the inner or dark ones being raised and lowered by electricity. The city electric current, when carried directly to the switchboard, gives currents of 110 volts and 220 volts. If the same current is brought to the switchboard through a transformer in the rear of the board, direct currents of low voltage, e. g., 4-10 volts—and large output—e. g., 400 amperes—can be obtained, also an alternating current of 75 volts with one phase, two phases, or three phases. Currents from storage and primary batteries located near by

are also connected with the switchboard. By means of this switchboard any of these currents can be sent to the science lecture-hall, to the teacher's demonstration tables, and to all of the students' laboratory tables. No. 215, Laboratory I; size,  $28 \times 36$  feet. This room is equipped for individual work. It is furnished with six tables,  $6 \times 4\frac{1}{2}$  feet in the interior of the room, and with a wall table 2 feet wide extending around the two light sides of the room. All the tables are supplied with gas, water, electricity, and with individual drawers for students. The interior tables are of plain, hard wood with oak tops; the wall table has an alberene stone top. At all the tables each pupil's space is three linear feet. The wall table is used for electrical work. There is no iron in its construction, and, to avoid vibrations, the top of the table is independent of the body and is secured by braces directly to the wall of the building. No. 215-o, students' apparatus room and science library; size, 15 feet 4 inches  $\times$  24 feet 2 inches. No. 216, Laboratory II; size,  $27 \times 28$  feet. This is equipped the same as Laboratory I, having in addition a hood. From this room, as is shown on the plan, open a dark room,  $13 \times 7\frac{1}{2}$  feet, for photographic and photometric work, and a workroom,  $13 \times 20$  feet. The latter is also furnished with a hood. No. 217, recitation room; size,  $21 \times 28$  feet. This is equipped with thirty-six stationary lecture-room chairs, having movable seats and arm tablets, with teacher's desk, and with two slate counterpoise blackboards, each  $9 \times 3\frac{1}{2}$  feet. All the rooms of this department are connected with one another by doors, except that there is no connection between the recitation room and any of the others.

The chemical department consists of the following rooms (see plan): No. 206, recitation room; size,  $28 \times 35$  feet. This contains forty-eight students' desks and teacher's demonstration table. The latter is  $17\frac{1}{2}$  feet  $\times$   $29\frac{1}{2}$  inches, and is supplied with gas, water, and electricity. At one end of the table is an electric lantern used for illustrative purposes, the curtain being at the opposite side of the room. No. 207, Laboratory I; size,  $28 \times 43$  feet. This room is equipped with three hoods, each  $2\frac{1}{2} \times 5$  feet, with teacher's demonstration table,  $28\frac{1}{2}$  inches  $\times$  7 feet 8 inches, with benches having arm tablets for thirty pupils, and with three students' tables for individual laboratory work. Each of these tables is 4 feet 4 inches  $\times$  13 feet 9 inches,



and is 3 feet high. At each end of each table, and a part of it, is built a cupboard for general apparatus, 17 inches  $\times$  4 feet 4 inches, and 29 inches high. All table tops in the department are of soft wood stained dark, and covered with a preparation of paraffin. Every table accommodates four students, allowing 6 linear feet to each student. Each student's individual equipment consists of a supply of water, gas, and electricity, a water vacuum pump, an outlet connected with the gas-preparation or gas-storage room, by which various gases may be drawn by the pupil as they are needed for work, an electric automatic lighter for the bunsen burner, and two drawers and a locker in the lower part of the table. Hydrogen, oxygen, and carbon dioxide gases are kept in supply constantly for pupils' use. Other gases, except those which attack iron, are manufactured or purchased in quantity, as they are needed. These gases are kept in the storage or preparation room, and can be drawn by pupils at their tables. The automatic lighter is practically an electric circuit; a spark is obtained by completing the circuit; the two terminals are the bunsen burner and a metal point projecting from the table. The use of matches is forbidden throughout the chemical laboratories. Each pupil's table space is supplied with six individual sets of drawers and lockers, for six different divisions of pupils. The working capacity of the tables can be doubled by giving each pupil 3 feet of space, instead of 6, allowing him one drawer instead of two, and requiring two pupils to use the same locker. Each individual set of drawers and locker is provided with a combination lock, every pupil having his own combination numbers; keys are not used. Extending the entire length of the table are two shelves, 8 inches wide, raised 8 and 16 inches, respectively, above the table. No. 208, Laboratory II; size, 28 $\times$ 58 feet. This room is fitted up practically the same as Laboratory I. The teacher's demonstration table and the students' laboratory work-tables, of which there are five, are identical in character and in size with those of Laboratory I. There are seven hoods, each 2 $\frac{1}{2}$  $\times$ 4 feet 3 inches, and each is supplied with gas, water, and hydrogen sulphide from an automatic generator in basement. Each laboratory has also, as most laboratories do, numerous drawers, shelves, cupboards, and desks which need not be described here. No. 209, preparation and workroom; size,

14×28 feet. It contains a hood and is connected with the basement by a dumb-waiter. No. 210, supply-room; size, 14×28 feet. This room contains the general chemical supplies. There is an acid storeroom in the basement.

The biological department consists of the following rooms (see plan): No. 218, biological laboratory; size, 28×36 feet. This contains a teacher's demonstration table, 12×2½ feet, supplied with water and gas, twenty-eight pupils' work-tables, three museum cases, a large sink, and an aquarium. The pupils' work-tables resemble ordinary flat-top business desks. They are 2 feet 10 inches long, 2 feet wide, and 2 feet 9 inches high. Each desk has a microscope cupboard and six drawers, one drawer for each pupil in six divisions. No. 219, museum room, workroom, and conference room; size, 18×28 feet. This room contains on one side a private workroom; on another side, an office; on still another, museum cabinets; while in the center, for conference purposes, are a table and chairs. No. 220, recitation room; size, 28×35 feet. This room is supplied with a teacher's desk, a counter-poise slate blackboard, 9×3½ feet, and arm tablet benches seating eighty pupils. These three rooms are connected by doors.

The commercial department consists of the following rooms (see plan): No. 109, first-year commercial classroom; size, 28×55½ feet; seats ninety pupils; ordinary desks and furniture; no special equipment. No. 110, junior commercial room; size, 28×58 feet; contains fifty-five special flat-top business desks; each desk is 2 feet × 38 inches, is 30 inches high, and has a tier of four drawers at one side; no other special equipment. No. 111, senior commercial classroom; size, 28×56 feet; contains forty-three special business desks, special filing cases, bank, and business offices. No. 112, typewriting room; size, 28×36 feet; contains teacher's desk, large table, 3 feet 8 inches × 8 feet, letter press, filing cases, and twenty-four typewriting machines. The latter are set in special flat-top typewriting desks, each desk being 3 feet long, 2½ feet wide, and 2½ feet high, and containing a tier of four drawers at one side. No. 116, workroom for duplicating, printing, and mimeographing; size, 18×28 feet; furnished with a wash bowl and equipped with three large cases, for books, paper, ink, and other printing materials, with two tables, 3 feet 8 inches × 8 feet, with two duplicating neostyles and with a paper-cutter. No. 116-o,

stenography recitation room; size, 20 feet 3 inches  $\times$  28 feet; contains lined blackboards, twenty-eight pupils' desks, and two arm tablet benches accommodating ten additional pupils.

The lunch counter is in the basement and consists of two counters 25 feet apart, each 36 feet long, built across the front corridor, and projecting under the main entrance. Cupboards, sinks, gas stoves, tables, and shelves are placed in the kitchen, at the end of the counter space, directly under the main entrance. Settees and chairs are scattered irregularly about in the adjoining rooms and recesses.

The basement contains not only the lunch counter, but also the boys' and the girls' bicycle-rooms, and rooms used for general storage purposes. As all the steam used in the building is brought from the Boardman Building, where the boilers and engines are located, there are no coal-bins in the basement of this building.

The ventilating system is one of the standard fan systems. Two fans in the two rear corners of the basement are operated by electric motors. Fresh air from outside passes between large coils of steam pipes into the fanrooms, whence it is driven by the fans through large ducts into all parts of the building. \* .

The heating system is a combination of direct and of indirect systems. All rooms and corridors are provided with steam coils and radiators, and the building depends mainly upon steam for its heat. By regulating the heat of the steam pipes between which the ventilating air is made to pass at the beginning of its journey through the building, the temperature of this air can also be regulated. The air usually leaves the fanroom at a temperature of about 75 degrees. This is kept fairly constant by thermostatic control of the temperature of the steam pipes. As the air loses 5 or 6 degrees before reaching the rooms, it usually enters the schoolroom at a temperature of 69 or 70 degrees. In very severe weather, however, the air has been driven into the rooms at a temperature of 93 degrees. Thus the indirect system can be used to fortify or to modify the direct system. In very cold weather, both systems are used, while in the mild weather of early fall and late spring the indirect system is sufficient. The main reliance, however, throughout the year is on the direct steam heat.

Electric clock systems not having proved entirely satisfactory, ordinary eight-day clocks were installed throughout the building.

The winding of these clocks is, of course, a burden on the janitor, but otherwise they require little attention, and the building is always sure of practically correct time.

A system of electric bells extends from the principal's office to all the rooms in the building. It is operated automatically by the office clock. Large electric bells in the corridors are operated by hand from the office.

The building is wired for electric lighting. At present, however, electric lamps have not been installed except in the auditorium. Other parts of the building are lighted by gas.

Dimensions: Length of building, 226 feet; breadth, 180 feet; classrooms,  $28 \times 35$  feet; recitation rooms,  $28 \times 20$  feet; width of corridors—front, 16 feet; side and rear, 14 feet; width of stairways—front, 6 feet 8 inches; rear, 8 feet; tread of stairs—height,  $7\frac{3}{4}$  inches; width,  $12\frac{1}{2}$  inches; light wells, four,  $21 \times 22$  feet; lavatories, six,  $19\frac{1}{2} \times 24$  feet; auditorium,  $67 \times 94$  feet; library,  $34 \times 50$  feet; science lecture-hall,  $55 \times 43\frac{1}{2}$  feet.

The location of the building is nearly ideal. For convenience of access and for satisfactory conditions of work it could hardly be improved. The building is situated on a quiet street, York Square, facing directly upon a small park. Street noises rarely reach its occupants. At the same time the building is within a minute's walk of a busy city thoroughfare, whence several street-railway lines connect with various parts of the city.

The architects were Brown & Von Beren, and the builders the George M. Grant Co., both of New Haven.

In conclusion, I wish to say that in this article I have given not only the general plans, but many individual details of the building. It seems to me that for those interested in studying modern high-school buildings for practical help and suggestions, these supplement each other and are about equally important.

I wish, furthermore, to add that, in my opinion, the building was wisely planned and the appropriation judiciously expended. In no essential has the building been a disappointment. If it were to be rebuilt, with the experience which has been gained by its occupancy for nearly two years, it is probable that in no important particular would the plans be modified.

## THE EDUCATIONAL SITUATION IN ENGLAND, 1904

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"Our secondary education has by the Act of 1902 been handed over very largely to county councils, excellent but heterogeneous bodies, and for the most part not only ignorant of educational needs, methods, and possibilities, but quite unaccustomed to their practical consideration—altogether unprepared and untrained for the responsible work now thrown upon them, and hampered by their besetting fear of the rate-payers. These county authorities need first of all to be themselves instructed and persuaded as to the right subjects for their schools, the co-ordination or proportion of subjects in any scheme to be encouraged, the methods of instruction, the sort of teachers to be appointed, the wisdom of spending public money on good education, as exemplified in other countries, like Germany, Switzerland, the United States, Denmark."—The Right Reverend the Lord Bishop of Hereford in his presidential address in the Educational Section of the British Association, 1904.

"If my words, even here, reach governors of schools, and other persons in authority, I call upon them to take steps, each wherein he may have power, to set a good example in this matter, and hurry on the better conditions for which all those who are behind the scenes are rightly and eagerly anxious. My last thesis is, that *the status of the teacher must be raised, that he must be trained and emancipated, and that the best brains of the country must be encouraged to enter this arduous but noble and self-sacrificing field of work.*"—Sir Oliver Lodge, in his presidential address to the Teachers' Guild of Great Britain and Ireland, 1904.

England was exhorted by the late Matthew Arnold to organize her secondary education. Such organization he regarded as educationally her greatest need. The Education Act of 1902 has laid the duty of seeing to this matter on the County Councils of the country. The nation is beginning to grasp the significance of the opportunities before it. It is true that to the foreigner surveying the present state of education in England the most palpable feature is the strife of parties and the warlike clamor of sectarians. But the reflective man looking over a larger survey of the educational landscape cannot but observe that the fields are white, even unto harvest, and that angry contentions as to Naboth's ecclesiastical vineyard must not so absorb the general outlook that the full significance of the grand possibilities shall be lost sight of.

The difficulties which have arisen in connection with sectarians

and non-sectarians in education in England during the last two years are, be it at once understood, connected with primary education. And, again, though the causes are strictly historical, they are largely discussed by combatants, on *a priori* grounds.

Since 1870, in England, primary education has been supplied by: (a) school boards, popularly elected, and with the power of levying local rates; (b) schools, instituted and supported by sectarian bodies. In the former either no religious instruction has been given, or such as commanded the approval of the popularly elected body; usually such religious instruction has consisted of Bible lessons of a non-sectarian character. Both these classes of schools, Board Schools and Voluntary Schools, have received, impartially, state grants from the Imperial Treasury. The Act of 1902 initiated the institution of local Education Authorities (which should virtually be Committees of local authorities which are already in existence for *other* local purposes) and swept away the School Boards. The Voluntary Schools, as well as the old Board Schools, were placed under the local Educational Authorities. Thus, all primary public schools were brought under the cognizance of a single authority in each district, and to this same authority was committed the task, never before attempted, of an organization of the higher education of the district.

The main object, therefore, of the Act was the organization of all the public education of a district under one educational authority. The difficulty was how to deal with the voluntary or sectarian primary schools thus for the first time brought under public cognizance. The unsectarian *a priori* party claimed that, if rates were levied for these schools, then they must be under public control. The reply of the sectarians was that the grants, which had been so important a factor in the maintenance of the primary schools (both those under School Boards and the Voluntary Schools), had come from the Imperial Treasury hitherto, without strong, or at any rate effective, protest. The most, therefore, that could be reasonably asked for would be for partial public control; and the real question in dispute has been with regard to the proportion of representation on the Managerial Board between the Foundation Managers and the Managers appointed by the local Authority. If the ratio were altered so that four of the Managers were elected by the local Authority and two were Founda-

tion Managers, the whole of the so-called educational difficulty would vanish.<sup>1</sup> Or perhaps it would be better to put the matter: *All public elementary schools maintained by public money should be under public control and management, and if partly maintained, the control and management should have a proportionate ratio to the cost contributed.*

The Education Act of 1902 provides that the Voluntary Schools shall be continued in their practice of religious teaching, and that, with this purpose in view, the appointment of the head-master shall be in the hands of the Managers, though with a power of veto from the local Educational Authority, on educational grounds. This is, of course, an imposition of a religious test on the teacher. It is, therefore, the legislation of a restraint on the freedom of movement of teachers. It is the closing up of avenues of advancement. But it is only fair to state that in 1902 the number of teachers in Voluntary Schools was 29,294; in Board Schools, 34,744. It might, therefore, be contended that the Voluntary teachers circulate in the posts in the Voluntary Schools, and the Board School teachers in the posts in the Board Schools. But there is no answer, in my opinion, to the criticism that the imposition of a religious test can be justified only if the entire funds for the maintenance of the school are provided by subscribers of the particular church concerned.

It will thus be seen that in Great Britain this question is in a transitional stage. Historically, we have a large heritage of denominational schools. The number of children in all the Voluntary Schools at the introduction of the Act was 3,074,149; in all the Board Schools, 2,778,127.

The "Free Churches"—i. e., substantially the Nonconformists—regard the payment of rates for the support of denominational schools, and schools in which any religious test is applied to teachers, as "dishonest, unjust, and unconstitutional." In Wales, where the Church of England is weak and the Nonconformists are very strong, it has been found that the Act is unworkable, against the overwhelming majority of Nonconformists, and a supplementary enactment has been made, viz., the Education (Defaulting Authorities) Act of 1904. The object of this Act is to provide money for the full educational working of the Voluntary Schools in a county, by treating the total

<sup>1</sup>The ratio appointed by the Act is the inverse of this.

expenses of the economic educational working of those schools as a first charge on the total grant made from the Imperial Treasury to the combined Voluntary and the County Council Schools. The lack of funds thus suffered by the Voluntary Schools *through the non-participation in the rates* (the course intended to be carried out by the Welsh County Councils) will thus be made good out of the Imperial grants earned by the Council Schools and the Voluntary Schools combined. The Imperial grants to a Welsh local Authority will be treated as a whole. The Board of Education will themselves administer the Voluntary Schools of any County Authority declared in default. The Board of Education will see that the intention of the Act of 1902, to provide an elementary education up to the standard approved by its Inspectors, is carried out. The Board of Education will then only hand over the balance of the total grant fund for the County, when the full educational and administrative expenses of the Voluntary Schools have been paid. The County Authority will then be left to supply from the rates the whole expense of working the whole of the Council Schools, without any aid from the Imperial Grants, unless, indeed, there should be a balance in the total Imperial Grant fund, after the payment of the working expenses of the Voluntary Schools. As the grants are only paid by the Treasury after recommendation by the Board of Education, the Board of Education is thus in command of the situation.

What, then, can the Welsh County Councils do? They have called a Convention, and have issued a Manifesto. In the Manifesto the leaders say:

Let the people of Wales resolve that their children shall not be made slaves to earn money for the parson. . . . Stop the children *earning grants*, and the Coercion Act [i. e., the Defaulting Authorities Act] can never be administered.

The plan of campaign, therefore, is to close the Council Schools and withdraw all the children possible from Church (i. e., the Voluntary) Schools. The Manifesto declares:

We shall open free schools for all children in every town, village, neighborhood. These schools will be held in the Nonconformist chapels and schoolrooms attached thereto. No child shall be deprived of educational facilities, and the education imparted will be efficient.

How are the funds to be supplied? The answer is, by voluntary contributions.



What is to be said with regard to such a manifesto? Surely this, that its promoters scarcely recognize how deeply they strike their note. It is stated that to carry out the scheme £100,000 would be wanted even to last out successfully a year and a half, and that this would be forthcoming. Of course, this is quite problematic, but even if the money were forthcoming, and even if it were to prove practicable for private individuals to supply the funds for a nation's schools, the real affirmation of such an experiment would be the sufficiency of voluntarism as against state intervention in educational politics. It would be a great triumph for Mr. Herbert Spencer's principle of individualism and might lead to a good deal of heartsearching as to the principles of socialism generally. But it would seem to many educationists in Great Britain that the leaders of what is called the Welsh Revolt have bitten off a great deal more than they can chew. That denominationalism and religious tests are doomed few educationists can doubt, but that you can promote the true interests of education by removing children from schoolrooms which at least have been passed as tolerable by His Majesty's Inspectors into the Nonconformist Chapels of Wales, which are notoriously bare and destitute of appliances, equipment, and attractiveness for the purposes of a school—well, probably not a single educationist of any responsibility would for a moment seriously maintain. The Welsh "Revolters" have protested largely against taking over Voluntary Schools on the score that the buildings are not up to the standard of educational suitability. But the same Revolters would not hesitate, apparently, to put children under conditions which would be unspeakably less sanitary and satisfactory, if they were to carry out the threat—the terrible threat of thrusting children into Nonconformist Chapels converted without adaptation into schools for children. The answer given, of course, either is that religious "freedom" is far more important than education, or else that suffering for conscience' sake is itself an advantageous substitute for education. There is, indeed, one other consideration, which is not taken into account by the Revolters, that the secular education of the Voluntary Schools required by the Act will be exactly on the level of that given in the schools provided by the Councils. The secular education is to be the same, in the same subjects, to the same standard—to be tested by the same Inspectors, to

receive grants on precisely the same terms. After all, the intellectual training which is received in secular subjects, if it is as thorough, in the Voluntary Schools as in the Council Schools, will similarly be a national asset. Intellectual training, moreover, will improve with improved positions of schools in staffs, equipment, and general competition. It is precisely to this intellectual training that we may look for the toning down of sectarian bitterness and narrowness. So that the schools, with the improvement of this organization and administration, and increased facilities such as are undoubtedly provided by the Act, have within themselves their own corrective. For it is by a shaping of intellectual activity that we must hope to spread abroad the "sweet reasonableness" which is so lacking, not only in sectarian schools, but in the criticisms and recriminations of denominationalists and undenominationalists.<sup>1</sup>

Without the shadow of a doubt, the imposition of religious tests on teachers will have to go. And yet, I confess that I cannot conceive that the country of Thomas Arnold will be willing to let go the ideal of a religious spirit in education. I cannot imagine a great poem—say, Wordsworth's "Intimations of Immortality" or the "Ode to Duty"—being taught to a class without the implication of a religious spirit, though I can quite understand the teacher dealing with his subject so as to arouse the religious implication without prejudice to a child whose parents belonged to any particular denomination. I believe, therefore, the true solution is the freedom of the teacher to teach religion, but the cultivation in teachers of a professional sense of responsibility in all references to religious questions and a due respect to all sincere religious convictions as such.

It has been well observed by Mr. George Sharples, in his Presidential Address to the National Union of Teachers:<sup>2</sup>

<sup>1</sup>It is worth while perhaps to point out, what is often overlooked, that the Board of Education have given their approval to a by-law of Local Education Authorities, "which provides that in the case of a child withdrawn by his parent from religious instruction (and parent has this right in the Voluntary as well as in the schools provided by the Local Authority) the time that he shall attend school shall be the time that the school is open for secular instruction only, thus enabling such child to obtain religious instruction in some other place and to come to the Public Elementary School in time to receive the whole of the secular education there provided." Of course, there is a Conscience Clause, whereby a child may be withheld from all religious instruction.

<sup>2</sup>This Union consists of 50,639 teachers.

However controversial the Education Act may be so far as religious education is concerned, *in secular instruction it is a charter of equal opportunity for every child*. Before its introduction there were 2,778,127 children in the Board Schools and 3,074,149 in the Voluntary Schools. On the education of the former was spent 60 shillings and 9 pence per head; on the latter, 45 shillings and 5 pence per head, which was found to be miserably inadequate. Surely it is a national concern that the three millions should have equal treatment with the two and three fourths millions. This injustice the Act remedies in no uncertain way.

The religious controversy which has arisen in connection with the Act of 1902 has clouded its real significance, and the enormous change which it has effected. These results have been admirably summarized in the address of Mr. Sharples from which I have just quoted, and from which I would venture to add the following passage:

The Education Act of 1902 came into operation in April, 1903. Up to that time the burden of national education had been most unequally distributed, and it was inevitable that, to be truly effective, the new Act must be of a somewhat revolutionary character. It proved to be revolutionary in its financial readjustments, and in the new character of its administration. It provides for the setting up of 333 Education Authorities, which cover the whole of England and Wales. It ruthlessly swept away 16,839 authorities, not one of which was competent to deal with Secondary Education, 2,564 School Boards (London excepted), and 14,275 bodies of Voluntary managers. It destroyed without remorse the great urban School Boards, which have done an unparalleled and a magnificent work in the uplifting of Elementary Education, equally with the small village School Board, which too often made its work a byword and reproach. It brings into line, and into organic connection with the local Authorities, the 14,275 bodies of Voluntary managers who conducted their schools without reference to any other school or public body, and places on the management of each school at least two representatives of the outside public.

The committal of the organization of elementary education to the local Education Authorities means a very different standard of expenditure on education in different districts of the country. But the wholesome breeze of public opinion and local sentiment combined will, it is believed, lead to a much greater interest in the improvement of secular education, and the administration of education will for the future take its due place in the general county and municipal affairs. The local Education Authority has power to levy rates, and the standard to which the education of the locality can be raised will doubtless be limited by the public educational spirit which can be evoked. The central government, administrative Department—the Board of

Education—has now both secondary and primary schools within its survey, its *locus standi* being secured by the payment of grants. The Board of Education can, therefore, throughout the country effectively control a *minimum* standard of efficiency on threat of a withdrawal of grants. It is interesting to note that from the Report of the Board of Education for last year, 1903-4, the grants to Elementary Schools amounted to over £9,825,000, as against rather less than £8,940,000 the previous year. The increase of expenditure on these schools, through the rates raised by local Education Authorities, must, of course, have been much more considerable.

It is impossible, in face of these facts, to doubt that the opportunities for sound advance educationally have been provided. Everything now depends upon public educational opinion. The first and the last words on the question for the future in England, in connection with primary education, are: Sound education cannot be cheap. Free education does not mean, and cannot mean, that education is not to be paid for. It means that school education is so costly that, unless it is undertaken by the community as a whole, individual parents, in countless cases, if they bore the cost themselves, would have to give such a poor education as would be unworthy of a great community. There is no case for free education, if it is done cheaply. One point is being driven home to the popular consciousness by politicians of every school of thought, viz., that Great Britain cannot afford to have poor primary education. John Bull will grumble at the cost. He always does. He grumbles loudest just when he is committing himself. But he really knows at last that education is for his own good, and he is irretrievably committing himself.

To pass to the consideration of the Secondary Schools. Here again we are face to face with the far-reaching Act of 1902. All grades of public education come with the survey of local Education Authorities. The Central body, the Board of Education, has, within certain limits, the disposal of grants to Secondary as well as Elementary Schools.

To understand the state of Secondary Education in England at the present time it is necessary to realize the relation of Secondary Schools to these two bodies—the Board of Education and the local

Education Authority. During the year 1903-4 there were 418 Secondary Schools, with 41,184 scholars, receiving grants amounting altogether to over £157,000. These grants to individual Secondary Schools have been in the past, and will be still more in the future, supplemented by the local Authorities. The application to the Board of Education for recognition as a grant-earning school implies the condition of Inspection by the Board of Education and the fulfilment of the conditions enjoined by the Board with regard to staffing equipment, and satisfactory evidence of educational methods being employed in the school. In all such schools, therefore, there is a minimum standard of efficiency guaranteed, or at least tested, and liable to test at any time, from His Majesty's Inspectors of Secondary Schools. These 418 Secondary Schools have hitherto been divided into two classes, termed technically Division A and Division B.

These grants to Secondary Schools have hitherto been given as a recognition of the satisfactory teaching of science and drawing. The New Regulations of the Board of Education with regard to the Secondary Schools contain a Prefatory Memorandum,<sup>1</sup> by Mr. R. L. Morant, the Secretary to the Board, which excellently explains the history of government grants to Secondary Schools in England. He says:

Until recent years, the only direct aid given by the State toward the education of boys and girls other than those in Elementary Schools was in respect of instruction in Science and in Art, whether given as a portion of the curriculum of a Secondary School or in special Classes. The Regulations for Secondary Schools have grown up around the old provisions of the Science and Art Directory. The sporadic Science Classes were gradually built up into Schools of Science; and the Schools of Science were subsequently widened into schools of what was known as the Division A type, providing a course of instruction in Science in connection with, and as part of, a course of general education. Aid has also been recently given on a smaller scale to schools in which Science formed an important, but not a preponderating, element in the instruction, known under the name of Division B schools. At the same time grants continued to be made directly toward the instruction in Science and in Art of Classes in Day Schools as well as of Evening Classes and of Classes held in Technical Institutions.

<sup>1</sup>Mr. Morant has initiated the "Prefatory Memorandum." It is a statement prefixed to new Regulations, explaining the educational and administrative principles which have led to the changes which the new Regulations embody. It is an official *apologia*. There is a frank recognition that the old order is changed, and that the Board of Education for the future is going to be sweetly reasonable.

The New Regulations for grants to Secondary Schools are, indeed, different from any previous "codes" of the Board of Education. If they are carried out in the spirit in which they are initiated, it is not too much to say that they are the beginning of a new educational era. It is the expressed declaration of the Board of Education that for the future the Secondary Schools which hitherto have received grants only on account of the science and drawing taught in them shall not so devote their special attention to these subjects as to run the risk of starving out the other subjects of the curriculum. To receive grants, it is expressly stated in the New Regulations, "the instruction must be *general*." Lest there should be any doubt in the mind of previous "grant-earning" secondary-school masters, the Prefatory Memorandum, after the manner of a pedagogical treatise, fully up-to-date, explains what is meant by instruction being "general":

It must be such as gives a reasonable degree of exercise and development to the whole of the faculties, and does not confine this development to a particular channel, whether that of pure and applied Science, of literary and linguistic study, or that kind of acquirement which is directed simply at fitting a boy or girl to enter business in a subordinate capacity with some previous knowledge of what he or she will be set to do.

Specialization is directly deprecated until after the general education has given all-around power mentally and physically, and until after there has been acquired an acquaintance with the structure and laws of the physical world, together with exercise in the accurate use of thought and language, and in the "practical ability to begin dealing with affairs." Next it is laid down that the course of instruction must be *complete*. The following full exposition of a complete course is given:

Instruction must be so planned as to lead up to a definite standard of acquirement in the various branches of instruction indicated above, and not stop short at a merely superficial introduction to any one of them. Secondary schools are of different types, suited to the different requirements of the scholars, to their place in the social organization, and to the means of the parents and the age at which the regular education of the scholars is obliged to stop short, as well as to the occupations and opportunities of development to which they may or should look forward in later life. But in no case can the course of a Secondary School be considered complete which is not so planned as to carry on the scholars to such a point as they may reasonably be expected to reach at the age of sixteen. It may begin at the age of eight or nine, or even earlier. Scholars may pass into it

from Elementary Schools at various ages beyond this, up to twelve or thirteen; and in schools of a high grade, which give an education leading directly on to the Universities, it may be continued up to the age even of eighteen or nineteen. But, as a rule, the years from twelve or thirteen up to sixteen or seventeen will be those during which it is most important that it should be carried on in accordance with a systematic and complete scheme.

In accordance with this statement of the object of a scheme of instruction in a Secondary School, the New Regulations will only consider as eligible for grants those Secondary Schools which provide satisfactory Courses of study for four years, as mentioned above.

Further, the instruction must be *graded* in its various branches. This requirement is accompanied with the comment:

Instruction which is not progressive, while it may be of some use as drill and discipline, is of little real educational value. It gives only a superficial and transitory acquirement, while at the same time it fails to interest or to stimulate the scholar.

With regard to the Curriculum, the New Regulations are framed so as to give great freedom for Schools to frame their own curriculum, so as to afford opportunity for thorough adaptation to local conditions. The following are the subjects of the general course:

The Course should provide for instruction in the English Language and Literature, at least one Language other than English, Geography, History, Mathematics, Science and, Drawing, with due provision for Manual Work and Physical Exercises, and, in a girls' school, for Housewifery. Not less than four and one half-hours per week must be allotted to English, Geography, and History; not less than three and one-half hours to the Language where only one is taken, or less than six hours where two are taken; and not less than seven and one-half hours to Science and Mathematics, of which at least three must be for Science. The instruction in Science must be both theoretical and practical. Where two Languages other than English are taken, and Latin is not one of them, the Board will require to be satisfied that the omission of Latin is for the advantage of the school.

Without entering into a close criticism of the conditions of the curricula thus laid down, it is important to realize that the above apportionment of hours will leave a margin of hours which will, in the future, make it possible for a school to be eligible for grants and to pursue effectively *humanistic* studies while satisfying the general demands. This is an enormous gain. For the English Secondary schools were fast becoming grant-earning science and drawing schools, and the literary, linguistic, and historic studies were sinking



into a parlous condition.<sup>1</sup> But the satisfaction with which educationists hail the possibility of recovering lost ground in the pursuance of humanistic studies by the schools is a good deal discounted by the consideration that the New Regulations expressly provide that the Schools hitherto known as Division A Schools—i. e., those Secondary Schools which received higher grants because of the larger number of hours given to science subjects—are still to receive the preferential treatment of the first beloved of the Board of Education. In cases where the Board specially approves of such subjects the grant may reach a maximum amounting to double the total amount of the ordinary grant. The justification which is pleaded by the Board of Education is:

1. That it is necessary for the continuity of schools already in existence, where the differential grant has already been given for some time.
2. That the cost of maintenance, in apparatus and general organization of highly developed Science Schools, is so much greater.

This double grant to special Science Schools is promised for 1904-5 and 1905-6. It is, however, greatly to be hoped that this marked differentiation will not be permanently retained.

One other reform should be named even in a general review of the New Regulations. It is laid down that scholars in the first and second years of the Course "may not ordinarily be entered for any external examination." This is substantially an official condemnation of the Preliminary Oxford and Cambridge Examinations, and is an assertion that boys of twelve and thirteen years of age are too young for external examinations. It is remarkable as showing an entire change of front in English opinion, which has seemed to be, in the past, that the more examinations a boy passed, the better for him and for his school.

The necessity for diminishing the multiplicity of examinations of pupils in Secondary Schools has been emphasized by the issuing from the Consultative Committee<sup>2</sup> of a scheme of Secondary School Cer-

<sup>1</sup>For illustrations see the remarkable communication to the Board of Education by Mr. J. W. Headlam, M. A., "On the Teaching of Literary Subjects in Some Secondary Schools for Boys," in *General Reports on Higher Education for 1902*, published in 1903.

<sup>2</sup>The reason for this exclusion is that the work of Inspection and Examination is already done by the Central Welsh Intermediate Education Board. The Board of Education supervises and then accepts the Reports of the Central Welsh Board.



tificates. The proposals are entirely in accordance with the principle of decentralization. Roughly speaking, the proposals are that the Board of Education should recognize school examinations conducted by other bodies than itself. The following suggestions made by the Consultative Committee show the main lines of the scheme:

School examinations should be controlled by a recognized examining body, which should be either (1) a University, or (2) a combination of Universities, or (3) an Examination Board representative of a University or Universities and of the local authorities which are prepared to co-operate with them. It is desirable that whatever the examining body may be, teachers of schools should, where possible, be represented, and with regard to (3), that every such Board should contain a large academic element.

That recognition of these examining bodies should mean recognition by the Board of Education, acting on the advice of the Consultative Committee.

That the following conditions should be required from schools which present candidates for school certificates:

a) Periodical inspection. Whether this inspection be conducted by officers of the Board of Education or by a University or other organization recognized under Section 3 of the Board of Education Act, 1899, the report of the inspection should be communicated to the examining body.

b) The communication of the course of studies pursued in the school to the examining body.

That an examining body should be at liberty to decline to examine a school if the result of the inspection has not been, in their opinion, satisfactory; or if the course of studies is such as they are not able to approve.

That a Central Board should be established for England (excluding, for the present, Wales and Monmouth),<sup>1</sup> consisting of representatives from the Board of Education and from the different examining bodies, whose duty it should be to co-ordinate and control the standards of these examinations, to secure the interchangeability of certificates, and to consider and as far as possible to adjust the relations of the examining bodies and their spheres of external action.

That since an examination held with the co-operation of the school in which a scholar has been taught is more likely to lead to a just estimate of the knowledge which he possesses than one held entirely by an outside body, the examination should be conducted in each school by external and internal examiners, representing respectively the examining body and the school staff.

That the course of the work pursued by a scholar during his school career should be recorded and reported on by his teachers, and that this school record and report should be available for reference in deciding his fitness or unfitness to obtain a certificate.

<sup>1</sup>This is a Committee of Educationists officially recognized to be consulted on certain matters of Secondary Education by the Boards of Education.

I have quoted somewhat fully from the details of this scheme, as the detail shows how determinedly secondary education is tending, in the mind of the Educational Authorities, toward organization. Undoubtedly, however, from the strictly educational point of view, the suggestion which is of most significance is that which provides for the Internal Examiner. If his position is secured as, on the whole, the permanent and leading partner in the work of examination, then the educational objection to the examinational system largely vanishes. Another interesting suggestion in this official document is that in language examinations no special books should be prescribed but that passages should be included from the books used in the school, as well as unseen passages, and that in the case of modern languages there should always be an oral examination.

I have now described the machinery of the centralized Authority—viz., the Board of Education—whereby, through the provision of grants from the funds placed at their disposal by the Treasury, a hold is secured on the whole of the schools which desire to earn grants. The Board of Education, it will be seen, has exercised its powers to secure:

1. That there should be a definite *minimum* of general knowledge, as to which, roughly speaking, all educationists will be agreed. The differential grant in favor of special science developments is debatable ground, but perhaps we are justified in regarding this feature as experimental. At any rate, there can be no doubt that a strong effort will be made to secure a reconsideration, and, if possible, a reversal of a provision which would in the long run tell against classical and humanistic curricula.<sup>1</sup>

2. That there should be considerable liberty to local Authorities to establish curricula (outside of the *minimum*) which shall be suitable to local conditions.

<sup>1</sup>A society has at this juncture been formed, called "The Classical Association of England and Wales," the first detailed object of which is: to impress upon public opinion the claim of classical studies to an eminent place in the national scheme of education. The list of members of the Society is extremely influential, and as the new developments of the County Council in Secondary Education are freely understood and realized, there will be a strong body of cultured men and women responsive to the appeal that such studies, whether bread-winning in the narrow sense or not (and while recognizing the importance of science-teaching in secondary schools), should not be unduly weighted in the handicap of the grants.

The *initiative*, both as to the number of Secondary Schools in a district, and as to the curricula of those schools (i. e., the margin of the curricula over and above the minimum of general knowledge), is left to the local Authority. The last word, however, as to both number of schools and curricula is with the Board of Education. This control is secured by the conditions which are and can be imposed as to the bestowal or withholding of grants, since local Authorities are not likely to institute schools which they would be willing to build and maintain entirely out of their own funds. The following is the scale of grants to be paid by the Board of Education for each scholar attending the four-year advanced course:

a) In the first year of the Course	-	-	-	£2
b) In the second year of the Course	-	-	-	£3
c) In the third year of the Course	-	-	-	£4
d) In the fourth year of the Course	-	-	-	£5

In a school which provides an approval special Science Course the grants, as already mentioned, may be made double the above sums. Before a school can obtain "recognition"—i. e., be eligible to earn these grants—certain conditions have to be satisfied.

The school premises must be sanitary, convenient for teaching purposes, adapted to the circumstances of the school, and provided with adequate equipment and appliances for the approved course of instruction. The plans of both site and buildings for new schools or enlargement of existing schools must be submitted to the Board for approval.

By another regulation it is provided that the teaching staff "must be sufficient in number and qualification for providing adequate instruction in each subject of the approved curriculum."

It will thus be seen that the local Education Authority has to provide for the school buildings, repairs, apparatus and equipment, and teaching staff. If it establishes or "runs" schools, it must be responsible for the margin between the total cost and the grants earned from the Board of Education. Of course, the pupils ordinarily pay fees, but these are usually kept as low as possible. The only source of revenue, excluding certain excise duties which are in the hands of the County Council ear-marked for secondary and technical education, are the rates. But there is a limitation, by the Act of 1902, of the amount of rates which may be employed in the payment of higher education to two pence in the pound. In this

statement, however, I have spoken only of the schools in which the local Authority accepts the sole responsibility. There are in all the counties other schools which have more or less of endowment, and are in the management of Governors who have been hitherto commonly independent both of the Board of Education and of the local Education Authority. The advantages of Central grants and subsidies from the local Education Authority are gradually drawing into the national organization of Secondary Education substantially all these schools, with the exception of the non-local schools—e. g., the Great Public Schools, strong private schools, and a limited number of proprietary schools, such as denominational secondary schools. It is clear, however, that comparatively few schools can permanently escape being absorbed into the system.

If the reader will here refer to the first quotation at the head of this article, he will see the view of a leading English educationist as to the local Authorities as the local controllers of secondary education. Let it not, however, be supposed that the Lord Bishop of Hereford is a pessimist. The educationists of England understand well enough the risks of the new departure. For county councilors, whose work hitherto has been that of seeing to local government generally, public works, roads, town, country affairs, health, and so on, to be further charged with education is a bold stroke. Of course, such a local Council is required to deal with school affairs through an Education Committee, on which are co-opted local men and women who have, in their opinion, the best claim to be regarded as educationists. But the advantage is great, in that the breeze of popular criticism is brought into school management and direction, a sense of responsibility is engendered in the people themselves, an educational sentiment and opinion must necessarily arise, and, finally, an educational pride in schools will be locally produced, in so far as in each district each set of schools can hold its own, comparatively with similar schools elsewhere, under other local Authorities.

It remains to be noted that many local Education Authorities are appointing Directors of Education, experts whose duties will include the advising of the Authorities—very much after the fashion of School Superintendents of American cities. In the earlier stages great responsibility will rest on them, and it is right to add that in most cases the work has been taken up by them with great spirit.

But in some instances local Authorities have recognized that the responsibility is so new and so unique that, in addition to the advice of their own educational officers, they have sought the help of the highest experts to whom they could look. The Board of Education has itself appointed specially qualified Inspectors of Secondary Schools, whose services have been placed at the disposal of local Authorities for consultation at the earliest stages. But, over and above the official experts, others have been called in, in some instances, whose experience and insight are of the highest national value, though not officials of the Board of Education. Pre-eminent among such consultative educationists stands the name of Mr. Michael E. Sadler. Two only of his reports are at present issued, viz., that which he has written for the local Authority of Sheffield, and that which has only just been issued for the local Authority of Liverpool. No account of recent educational utterances in England would be complete without drawing special attention to these reports. No outsider could readily get so clear an insight into English educational problems at the present moment as by a careful study of these two documents. From reports which almost amount to educational treatises I can here only show several lines of tendencies, which are suggested as desirable, toward which the local Authorities should proceed by way of development. As to the aims of Secondary Schools, Mr. Sadler emphasizes again and again the need to bear in mind, from the beginning of the new organization in both these cities, the idea of quality rather than quantity—"to lay stress on the need for having first-rate teaching without which costly school buildings and equipment are money almost thrown away." Every earnest educationist must agree how much more important it is to have one really good school in a city which shall be a marked influence in its thoroughness of culture, in its solidity and unity of curriculum, in the enthusiasm and attainments of its teachers, in its completeness of equipment, and in its surroundings of space for games, than several mediocre institutions which by meagerness of resources shall "muddle" through, so as to just pass muster. We want a clear standard as to what a good Secondary School should be. Nothing is more important than to get this idea.

One most valuable feature of Mr. Sadler's Liverpool Report is the citing of instances of good types of Secondary Schools and the

simple statement of the real cost of such education. These instances will be of interest in other countries than England, and I venture to quote them:

Year	School	Average No. of Boys	Net Expenditure <sup>1</sup> for Year	Average Cost per Head
1903.....	Norwich Grammar School	116	£2,376	£20 0s. 8d.
1903....	Nottingham High School	329	£7,580	£23 0s. 9d.
1902-3....	Bristol Grammar School	179	£4,448	£24 16s. 11d.
1903.....	St. Paul's School.....	581	£24,279	£41 15s. 0d.

From such a statement it is clear that for a school of the type named, while the maintenance expense will be considerable, the initial expenses of adequate ground, buildings, and equipment will be exceptionally heavy, in cases where such an institution has to be started *ex vacuo*. Even where a Secondary School, with a moderate endowment, exists, and is taken over by a local Authority, the expenses of adaptation will be heavy. Hence the need of Mr. Sadler's warning that really first-rate Secondary Education is costly. All the types of schools on a lower plane than the highest will be correspondingly depressed, if the great municipalities do not see to it that their best schools are as thoroughgoing as administrative and educational concentration can make them. As Mr. Sadler puts it: "There is some danger in England lest we should attempt to provide secondary education at a cost incompatible with real intellectual efficiency." The emphasis with which Mr. Sadler is pointing out this danger is one of the best guarantees that the danger may be averted. For though the British Public may be slow to appreciate great ideas, when once they have penetrated the national mind, it is not unwilling to pay the price and to have the *real thing*. Mr. Sadler's plea for quality extends to schools of lower grade as well as for the highest. Each should be good of its kind, and if the cost is heavy, then the limit should rather be in the number of schools which the New Authorities take in hand at first.

Again, with regard to the scholars, it sounds undemocratic to suggest that numbers are not overwhelmingly important at first, yet

<sup>1</sup>These "sums" do not include any allowance for rent of buildings and ground; interest on capital, expenditure, debentures, mortgages; pensions or exceptional expenses (e. g., erection of fives-courts).

Mr. Sadler utters a warning which should reach much farther afield than Sheffield:

Avoid doing children of mediocre ability the cruel kindness of encouraging them to enter on a course of education designed to prepare them for professions in which they have not the capital or the intellectual capacity to succeed.<sup>1</sup>

On the other hand, it is highly desirable, and even urgent, to make the transition from the elementary schools to the high schools really easy and natural for the thoroughly competent and brilliant children. One of Mr. Sadler's most salient suggestions is that the public elementary schools should themselves be partly strengthened by a special equipment to the upper departments of the elementary schools, so that those children who do not pass on to the secondary schools should have a higher and more efficient training, and be more systematically taught how to work for themselves, than at present. As for the more capable boys who go on to secondary schools, Mr. Sadler considers that the selection should not be done by merely mechanical tests of a written examination *alone*. For this is an inducement to cramming. Mr. Sadler's proposed plan for the award of scholarships from the elementary to the secondary school combines nomination and examination with "cram" subjects as far as possible eliminated, and a Board of Examiners representing elementary and secondary schools which should examine by written papers and orally. One further point only from Mr. Sadler's Reports<sup>2</sup> I will mention, viz., his animated plea for a sound economic basis of the teaching profession.

A man is soured, and is apt to lose his love for his profession, when year after year his salary remains far below that which he could have certainly earned in another and not more arduous calling. Nor does the matter affect himself alone. Discouragement and dissatisfaction in the minds of the teachers have a depressing and hurtful influence upon the vital tone of the school.

Mr. Sadler's suggestion is that the minimum for the salary of a fully qualified graduate assistant teacher in a Secondary School should be a commencing salary of £150 a year, with annual increments of £10 up to £300 a year.

<sup>1</sup>In his Liverpool Report similarly he says: "It is not to the interest of the community to push forward large numbers of persons of mediocre abilities into callings the duties of which they are not intellectually competent to discharge."

<sup>2</sup>Some readers may be glad to know that Mr. M. E. Sadler's Report on Secondary and Higher Education for Sheffield (price 1s.; on Liverpool, price 2s. 6d.) can be obtained from Eyre & Spottiswoode, East Harding Street, Fleet Street, London, E. C.



The second heading to this article shows that Sir Oliver Lodge, like Mr. Sadler, realizes that the educational possibilities are limited by the attractiveness of the teaching profession to men of high capacity. It is probable enough, in the present spirit of the age, that the County Councils will subsidize existing Secondary Schools and start new ones, with all the glamour attaching to the vision of new municipal buildings gracing the center or outskirts of their towns; but will they have the foresight or the insight to attract the "best brains" for the internal working of the schools? Wise local Authorities will recognize with Mr. Sadler that no part of the expenditure is more remunerative than that devoted to the maintenance of a very highly qualified staff of masters. I have not dealt in this article with many educational movements and problems in England which in various sections of both the public generally and the smaller public of teachers are being ventilated and agitated. I have wished to keep as far as possible to the highway of English educational policy, and to offer some account of *questiones vexatae*. There is a stirring of the educational waters in every direction. All sections of teachers are forming unions to discuss their position and their problems. Attempts are being made to unify all the sections, while each in itself is solidifying. The movements in connection with the Training of Secondary and of Elementary Teachers would require an article to themselves. The British Association for the Promotion of Science seems to have taken Education permanently as a Section of more or less scientific interest. A Royal Commission has recently reported on Physical Deterioration, and has recognized the important place which the school occupies in social amelioration. The newspapers of every party are occupied almost to repletion with educational politics and suggestions. The weeklies, the monthlies, the quarterlies, take up the same tale. Never has the idea of Education come so closely home to the people. The local Authorities and their projects bring it to their very doorsteps. Education, verily, is in a state of incubation. What the new awakening of life to which we look forward has in store for us largely depends on the prudence, insight, and enthusiasm of those in authority. What we really lack are educational leaders. We want an educational Wilberforce, Peel, or Cobden. The country is ripe for educational thought as well as action. It wants an electrifying current to



bring all the latent aspirations and well-meant gropings on to a higher plane.

The material resources for educational purposes can probably be increased if the educational idea can be put more clearly and definitely. The educational machinery is fairly supplied, and nearly in working order. Yet the whole system looks like a very complicated Frankenstein. Education, however, is a spiritual force, and it is of the Prophet's mission to breathe into the national educational anatomy large human, vital, spiritual ideas of education. It is for an educational Leader that the country, unconsciously, is full of longing desire. If there is to be no true prophetic gift among our Educationists, then, indeed, the Bishop of Hereford's words are full of pathos, if not indeed of educational tragedy.

#### REFERENCES FOR MATERIAL AS TO THE EDUCATIONAL SITUATION IN ENGLAND, 1904

*Report of the Board of Education for 1903-1904.* (Price, 4d.)

*Report on Secondary and Higher Education in Sheffield*, by M. E. Sadler. (Price, 1s.)

*Report on Secondary Education in Liverpool*, by M. E. Sadler. (Price, 2s. 6d.)

*General Reports on Higher Education.* (Price, 6d.)

*Regulations of the Board of Education for Secondary Schools.* (Price, 2d.)

*Regulations for the Instruction and Training of Pupil Teachers and Students in Training Colleges.* (Price, 2½d.)

*Report of the Inter-Departmental Committee on Physical Deterioration*, Vol. I. Report and Appendix. (Price, 1s. 2d.)

*Regulations for Elementary Schools.* (Price, 4½d.)

All the above can be obtained from Messrs. Eyre & Spottiswoode, East Harding Street, Fleet Street, London, E. C. (Postage extra.)

"Full Report of Speech of Bishop of Hereford at the British Association," *Times*, August 19, 1904. (Price, 3d.)

A statement of general principles of the *doyen* of British educationists, Emeritus Professor S. S. Laurie, is to be found in *The Code of 1903 and Freedom in Education*. (Edinburgh: Oliver & Boyd; price, about 1s.) This has special reference to Scotland, but the principles are so thoroughly educational as to have general value.

*Fourteenth Report of the National Association for the Promotion of Technical and Secondary Education*, 1901-3. (10 Queen Anne's Gate, Westminster, London, S. W.; price, 1s.)

*Record of Technical and Secondary Education: A Quarterly Journal of the Progress made by County Councils and other Local Authorities in the Administra-*

tion of the Education Acts. Issued by the National Association for the Promotion of Technical and Secondary Education. (10 Queen Anne's Gate, Westminster, London, S. W.; price, 2s. 6d. each quarterly number.) This very valuable publication is obtainable through The Macmillan Co., New York.

A good idea of educational aims and purposes in England can be gained by reading the *Teachers' Guild Quarterly*, published March 15, June 15, October 15, and December 15 for the years 1903, and the current year up to October, 1904.

The *Schoolmaster* (1d.), weekly, is the organ of the National Union of Teachers, and represents Elementary Education.

For Secondary Education there is one weekly paper—*Education*. The monthlies are *Journal of Education*, *Educational Times*, *School World*, and *School*—all published at 6d. the number, and all keenly alive to present movements.

## THE EDUCATIONAL MUSEUM OF PARIS

FRANK PIERREPONT GRAVES  
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The educational museums of the world now number about half a hundred. Some seven-eighths of these are in Europe, and almost a majority of the number are in Germany, the land of the school-master. These museums are supported by the city, state, or nation, or by a combination of all these agencies; or their maintenance may even be partly drawn from the treasury of some teachers' association. Occasionally they have grown up as memorials to some famous educator, as in the case of the Pestalozzianum in Zürich, the Girard Museum in Fribourg, and the former Comenius-Stiftung in Leipzig; but generally they have been called into being simply as adjuncts to the educational system of a country.

The general purpose of the educational museum is to show the condition of education and schools throughout civilization, to inform teachers and others of recent progress in education, to illustrate the best methods of instruction, and to preserve mementos and writings of the great educators. Through a museum of this kind much is gathered together that could be seen, if at all, only by extensive travel, and is so arranged as to render possible an intelligent comparison.

There is also a growing tendency to make these museums of interest and value to those for whom the schools exist, the pupils themselves. Pedagogues have gradually come to understand that books can afford only second-hand information and should not be exclusively relied upon in instruction. It required the labors of at least four of the world's greatest reformers to make us understand that the pupils' eye, ear, and hand must be brought to serve his mind, but we have learned our lesson well. The child is today encouraged to follow nature in a far deeper sense than Rousseau ever dreamed, and the museum, the laboratory, the workshop, and even the kitchen are now recognized as educational agencies of the most valuable sort.

The new educational museum of the Teachers College in New York has, in particular, demonstrated<sup>1</sup> some of the ways in which educational exhibits may, on this principle of first-hand knowledge, be made to stimulate the mental growth of the children as well as to inform and train their teachers.

The educational museum, then, bears the same relation to the general museum that the library of education does to the general library. The latter in each case may be made of much service to both teacher and pupil, but the collections that have pedagogy alone in view have the advantage of being more exhaustive and requiring less search for what is needed. Museums of this character have long been wanted in this country, and leading educators<sup>2</sup> and officials have frequently expressed a desire that they should be founded. In this matter the United States has been outstripped by all the other leading nations and by some of her nearer neighbors. In the city of Toronto, Canada, more than half a century ago there was established the first educational museum in history, while it is nearly thirty years since progressive little Japan added this feature to her system of education; and even the South American countries have now been represented for several years by museums at Rio de Janeiro, Montevideo, and Buenos Ayres. Until recently, the only attempt in the United States was made at Washington in 1868, and was soon abandoned for want of support from Congress or any other source. Although a special appeal has often been made by the commissioner of education, the museum has never been revived.

Now, however, that the Teachers College of Columbia University has shown how valuable an institution an educational museum can be made, it may ere long be generally demanded by the teachers and schools throughout this country. One at least may gradually be developed in the capitol or metropolis, or at the chief educational institution of each state, while the four other teachers' colleges of the country, connected respectively with the Universities of Chicago, New York, Missouri, and California, should not be slow to follow

<sup>1</sup> See especially B. R. Andrews, "Possible Values of a School Museum," *Teachers College Record*, May, 1904.

<sup>2</sup> See "Proceedings of the Department of Superintendence of the National Educational Association for 1881," pp. 57-66.

the lead of Columbia. Meanwhile, some account of the development and management of the leading educational museum in the world, the Musée Pédagogique of Paris, may not be without interest.

Anything French that can elicit commendation from a German educator is likely to be pre-eminent of its kind. It is now some time since the director of the Pedagogical Library of Leipzig said of the similar institution in Paris: "It stands by itself among all the col-



FIG. 1.—The Educational Museum of Paris Musée Pédagogique

lections of pedagogical works in the world, and never fails to arouse the admiration of strangers." Many improvements have taken place in the library and other collections of the Musée Pédagogique since these words of praise were spoken, and the superiority of the Paris institution is more widely acknowledged than ever. Its development, however, though covering but a quarter of a century, has been gradual and fairly steady.

Although Toronto, London, and several of the continental cities antedated Paris in the actual establishment of an educational museum, the first suggestion of such a set of collections was made in a pamphlet

issued by M. Jullien at Paris in 1817. His plan for forming a special commission to collect material concerning the educational systems and institutions of Europe seems, however, to have been somewhat too large and vague to attract any general attention.<sup>1</sup> But the idea did not die. It reappeared in 1831, and in 1867 it took more definite shape through the possibility of making the scholastic exhibits at the Paris Exposition the beginning of a permanent collection. That attempt failed, however, and it was not until 1871 that any collections were made. During that year and the two following, Jules Simon, minister of public instruction, secured a mass of educational documents, but he shortly afterward retired from office, and for almost six years the enterprise was dormant.

In 1879, at the urgency of the famous Buisson, who was at that time one of the primary inspectors, and had published two articles on the feasibility of such a project, Minister Bardoux issued a decree which officially instituted "an educational museum and a central library of primary instruction." Even before the ministerial announcement, however, M. Buisson had been authorized to arrange with the various foreign powers for an exchange of educational objects. These were placed in the Bourbon Palace, the building ordinarily occupied by the French Senate, which, however, was at that time sitting at Versailles. A museum of education was thus at length inaugurated.

The following year, however, the legislature reclaimed its Paris domicile, and the museum was obliged to remove its collections to cramped, unsuitable, and merely temporary quarters in the Collège Rollin. Despite this and the natural difficulties attending the project, great strides were made during the next five years in the equipment and organization of the museum. The first year, through the representations of the ever active Buisson, the splendid collection of pedagogical books belonging to M. Rapet was purchased for the library. This consisted of some 4,000 volumes, which covered practically all the documents and reviews of primary instruction which had ever been issued by France, Germany, Italy, England, and the United States, and of 284 books relating to Pestalozzi and

<sup>1</sup> This description is largely based upon the recent official report, *Le Musée Pédagogique, 1879-1904, historique et régime actuel*, as well as upon personal observation of this and other well-known museums of Europe.

his works, which was a third more in number than had with the greatest pains been collected by that philosopher's native city of Zürich.

During this period also the Musée started its circulating library of educational books for the benefit of those fitting themselves for teachers in the infant, primary, and normal schools. Also the now well-known *Revue Pédagogique* was begun at this time as the special organ of the museum for educational inquiry. The narrow quarters were a very great hindrance, but during these years a beginning was made on the splendid set of relief models and scientific apparatus now owned by the institution, and the first laboratory was established.

Also during this epoch, in 1881, the various collections of the museum were for the first time definitely arranged. They were divided into four sections: (1) plans of school buildings and furnishings; (2) apparatus for instruction; (3) the general library; and (4) books on the history of education; and, with slight modification, this has been the basis of division ever since. Not until three years later was there any catalogue completed. At that time a card catalogue of all the books in the library was prepared, and not long afterward there was arranged a duplicate catalogue in three sections, comprising the pedagogical works, the textbooks, and the books of reference, respectively.

During these years, too, the Musée Pédagogique began its hospitality to committees and associations connected with education, which has ever since been a policy pursued by the administration. At this time several committees on school buildings, pedagogical libraries, geographical, physical, and biological apparatus, which had been appointed by the minister of public instruction, held their meetings at the museum and found there the best possible means for pursuing their inquiries.

In 1885, just as the city found it necessary to take back the Collège Rollin for its own use, a commodious building on the Rue Gay-Lussac most fortunately became vacant, because of the combination of two normal schools, and by ministerial decree was placed at the disposal of the Educational Museum. The Rue Gay-Lussac is a street in the midst of the dingy "Latin quarter" of the city, but, as the name of the section implies, the museum is situated in the vicinity of the most

renowned educational institutions of France. The Sorbonne, College of France, and School of Mines are all within three or four blocks, and the Higher Normal School is just around the corner. Although the building is barely passable in appearance, it has, from the beginning, fitted the needs of the museum exactly. It is larger than the Collège Rollin and well adapted to the installation of the collections.

A plan of arrangement was immediately decided upon, which has, in general, been maintained ever since. On the ground floor were placed the collections mainly of interest to sight seers and transient visitors. These include the school furniture and apparatus, and various special and temporary exhibits. Certain rooms were reserved for conducting examinations and conferences. In the first story were placed the libraries and collections for study, while the rooms of the second story were utilized for duplicates, records, and works in charge of the museum for the time being. The two gardens seemed to have been especially created for the botanical work of the museum.

The decade following the occupation of the new building has been officially recognized as the most active period in the history of the museum. All existing features were greatly enlarged, and many others were added. Among the additions to the library were a collection of pedagogical books bought in Italy at the order of Buisson; several sets of books and atlases given by the publishers after the exposition at Antwerp; and 3,000 volumes presented to the French government by the minister of Uruguay. M. Buisson also persuaded a number of publishers to give their best books for family reading, promising to exhibit them with their price where they could be seen, and thus started "the library of recreation." About the same time, that its scope might not be limited to a mere depository, the museum undertook to publish at irregular intervals a series of "memoirs and scholastic documents" of interest to the different stages of public education. Within a couple of years thirty-four small treatises on a wide range of topics had been issued. They included subjects as far apart as a parliamentary debate on school law, a dissertation on a rare edition of Aristotle's *Physics*, and an account of the New Orleans Exposition. This branch of the work had to be discontinued in 1892 for want of funds, but not until 120 pamphlets had



been issued. Their place has been taken since the union of the Bureau of Information with the Musée Pédagogique two years ago, by the series of publications issued by the bureau.

Also early in this period of development the first two volumes of the general catalogue were printed. The publication consisted of (1) an index of all the books according to their authors; (2) a list of administrative documents of all countries; and (3) a systematic index of the books according to subject-matter. Two years later, again upon the advice of Buisson, there was completed a system of cross-references such that an investigator might, from the name of a man or a country, a special title, or the general subject, find what books and articles on the field he wished to investigate were in the library, and what treatises on the subject had already been published in any language.

During this decade of activity, an effort was made to arrange the objective collections of the museum as systematically as possible, that they might become instructive as well as interesting. The rooms containing the collections for geography and those for mechanical and free-hand drawing from this time forth were more attractive to students than to transient visitors. Among the new exhibits that were added was a collection of copy-books from pupils in the same grades throughout France, that one might compare them and get an idea of the attainments in the average primary school. In a good-sized room of the second story there was also opened an exhibition of needle-work done by the young women in the normal and upper primary grades. This exhibit, which consists mostly of dolls dressed in the costumes of all parts of France and other countries, has always attracted a large number of curious visitors. On one Thursday, which is the exhibition day of the museum, the writer found that no less than half a dozen different countries were represented among those visiting this interesting collection.

During these years one entirely new function was assumed by the museum. Conferences were opened under the direction of distinguished educators, to assist candidates in preparing for positions in the primary and normal schools, and for primary inspectorships. These conferences, in which the greatest freedom of discussion prevailed, were of immense benefit, and were greatly appreciated.

The museum also continued to offer the use of its rooms to various commissions and societies. Examinations of teachers and pupils for admission to the normal schools were conducted here, and in this place also were founded the Society for the Protection of Children, the Society for the Prevention of Child Mendicants, as well as the famous Anglo-French Guild, which was instituted for the benefit of French teachers of English.

As a result of all this progress, by the end of the decade, in 1895, the Educational Museum of Paris was well known in other countries. It had made exhibits at all the large expositions of the period—New Orleans, Paris, Chicago, and Lyons—and had been praised by prominent men in many lands. It was everywhere recognized as the leading institution of its kind in the world.

While the museum had been extending its service in so many directions, its annual income did not increase correspondingly, but remained at the fixed appropriation of 40,000 francs. Most of this sum was by 1895 consumed in paying the various officers and employees that had become necessary. For this reason, during the next eight years it was impossible to extend the work of the museum in any direction where a new expenditure would be required.

Even with this condition of affairs, some progress was made. In 1896 two educational societies gave their entire collections of stereopticon views to the museum, that they might be used in popular conferences and for the education of adults. That it might entail no expenditure, on the part of the museum to operate this new feature, one of the societies even guaranteed the expenses of transporting the views to the different centers, and of repairing any views damaged in use or transportation. Also through the Paris Exposition of 1900, as had been the case in 1878 and 1889, the museum was greatly enriched by various educational objects from foreign lands, and it now became necessary to construct a special room to contain them.

By 1903, however, it was evident that the museum could not perform its best service as long as it was so financially restricted, and that it must give up one of two things, both of which had contributed greatly to its prestige—its publications or its conferences. Some increase in its income was imperative, if its usefulness were not to be permanently crippled. This demand was supplied in March, 1903, through the combination of the museum with the Bureau of Information and Studies.

This Bureau of Information had been established two years before as a division of the ministry of public instruction, but with considerable authority of its own. Its functions, which had been somewhat undefined by the decree which established it, were limited by the director to two chief duties: (1) to unite, classify, and catalogue the scattered official documents that would explain the school administration of France to a stranger; and (2) to start substantial investigations on educational problems of the day, and publish the results in monograph form. Its union with the museum effected an economy and strengthened both institutions. Each possessed what the other lacked; the bureau had all the recent literature of education, which the museum had been unable to procure, while the museum had on its staff the trained specialists that were needed to push the investigations desired by the bureau.

To summarize this account of the features, which have so gradually developed, we may group the divisions of the Educational Museum of Paris under five heads. Three of these are separate departments—the library, the bureau, and the museum; while two auxiliary services—the stereopticon views and the statistical documents—have been associated with them. Their present condition is as follows:

1. *Library.*—The combined libraries now contain nearly 75,000 volumes and pamphlets. The educational museums at St. Petersburg, South Kensington (London), and Leipzig probably possess more works, but as their books were largely acquired by gift, they are not nearly as select or serviceable. As might be gathered from the preceding account of the various accessions, nearly every department of education has now come to be represented in the Paris institution by something more than a working library.

The entire library, pedagogical and otherwise, may be classified under four heads—reserved books, general works, official documents, and periodicals. This does not include the manuscripts, which are in another room. The circulating library is also kept separate. It is now sent to teachers in all parts of France. The books are forwarded and returned post-free, may be kept for two months, and then renewed without difficulty. This traveling library now consists of three classes of works—literary, scientific, and pedagogical.

The general catalogue will probably never be printed again, as the library is too large and growing too rapidly, but catalogues of

special collections and of the circulating library will be issued from time to time. The general catalogue is written out in some forty large volumes, which may be indefinitely extended. The cross-references, as already seen, are so complete that one has little difficulty in securing all possible material upon any subject he desires.

2. *Bureau*.—This department, which is now known as "the office," is in charge of Dr. V. H. Friedel, who is a specialist in pedagogy and speaks fluently all the leading modern languages. In a most courteous way he furnishes information, or points out appropriate literature to anyone upon the system of education in France or any other educational subject. From this department have already been issued six important monographs, three of them having been completed before its union with the museum. These publications take the place of the former "Memoirs," and are known as the second series of publications of the museum.

3. *Museum*.—With the exception of the collections of instructional apparatus at St. Petersburg, the museum proper in Paris now contains the most complete exhibit of educational objects in the world. Although much time has been given to arranging them, these exhibits are not even yet as well organized as the systematic collections of the excellent museum in Brussels or the more modest material of the Teachers College in New York or the Pestalozzianum in Zürich.

The collections of the Musée Pédagogique may be catalogued as follows: (a) the foreign room; constructed for objects obtained from the exposition of 1900; (b) the French room, containing the work of teachers and pupils; (c) and (d) two rooms in which publishers may deposit any of their articles save books; (e) a room filled with apparatus for teaching the mathematical and physical sciences; (f) a cabinet of natural history; (g) and (h) two rooms containing models for drawing and the work of the pupils in this line; (i) a room of geographical apparatus; (j) a room filled with pictures of school buildings, plans, etc.; (k) a room containing the exhibit of needle-work and the dolls dressed in the costumes of all countries.

4. *Statistics*.—The documents of this department relate mostly to the lectures for adults, the conferences, and the inquiries into popular education in general. Here anyone who desires to found an educational work of any sort can learn the conditions under which

similar organizations were created. All the documents in the office of the minister of education and in the library of the museum have been transferred to this auxiliary department. Although it is meeting with constant additions, it is kept carefully classified.

5. *Stereopticon views*.—The patronage of this branch of the museum's work has now been so enlarged as to include not only teachers, but also military officers of the various barracks. The various sets of views now make in all about 35,000 trips annually.

The present director of the Musée Pédagogique, Dr. Charles V. Langlois, was formerly in charge of the Bureau of Information, and upon its consolidation with the museum, was transferred, together with his associate, Dr. Friedel, to the new organization. He is a polished gentleman and scholar, having until four years ago been an assistant professor in the University of Paris. What he and Dr. Friedel have already accomplished for the Educational Museum of Paris marks a service second only to that rendered by the distinguished Buisson in the early days.

With so large-minded an administration, it is not surprising that the museum, besides the five functions mentioned above, continues the policy of hospitality. It throws wide its doors to conferences and meetings of different scientific and professional societies. Among the most recently received are the Society of Child Psychology, the International Society of Pedagogical Studies, and the Association of Modern Language Professors. Feeling that the museum should be the official residence of actual teachers as well as of those in embryo, the authorities have taken the initiative and called conferences of the students and professors of Paris, to consider questions of method and professional interest. Thus the Musée Pédagogique not only furnishes the means for broadening the minds and elevating the ideals of the teachers of the capital and the entire country, and welcomes to its privileges as well any educators from foreign countries, but it also strives to bind together all the teachers of France and secure greater recognition for the profession everywhere.

Such is the leading museum of education in the world. Does it not contain many features that might be made of value to our educational system? Of course, any foreign institution, however suggestive, cannot be imported bodily, but must be adapted, if it is to contain

aught of good, to the genius and needs of our people. It may be, too, as has been the case with many ideas we have borrowed, that we shall be able to improve upon the original.

The experiments of our one educational museum, that in New York, would seem to indicate the truth of both these propositions. There has been no need of adding to its functions special conferences to prepare teachers, nor of maintaining a library, as these departments are already well managed by the Teachers College; and, as stated at the outset of this article, the museum in New York has already gone farther than the great Musée of Paris in making its collections of value to the school children themselves, and in finding by careful experimentation where the true usefulness of such an institution may lie.

We should not forget, however, that the chief reason for the marvelous development of the Musée Pédagogique has been the profound belief and the genuine interest in its usefulness of all the great educators and statesmen of France. If our own prominent men could, regardless of political creed, be brought to a similar interest, every large city of this land would contain an educational museum doing at least as valuable a work as that in Paris.

## A VISIT TO THE BATTLEFIELDS OF CÆSAR

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So many classical teachers nowadays pass through France in going to or from Italy that it seems worth while to call their attention to the ease with which they can visit several of the most important sites of Cæsar's battlefields along the way. It was my fortune during the past summer to explore four of these localities—namely, Alesia, Bibracte, Gergovia, and the site of the battle between the Romans and the Helvetians; it was a surprise to find how quickly one can reach these localities, and how thoroughly he can study them, without leaving the beaten line of travel for more than four or five days. Certainly the increased vigor and freshness which the teacher of Cæsar will put into his work after such an experience, and the added inspiration he will himself feel, will sufficiently repay the effort required even if it involves some extra expense and some delay in his itinerary. One needs to know a little French, to be sure, but everyone who has traveled in a foreign land is well aware that he can procure the actual necessities of life with only a slight knowledge of the native language. The French peasants are invariably obliging and not unpleasantly inquisitive; they will go a long distance out of their way to show the right road, while the good manners of the boys are a revelation to the stranger. As they pass you, instead of staring or raising a derisive shout, as boys in some other countries will often do, these French boys shyly raise their hats and wish you a "Bon jour, Monsieur." The French inns are clean and inviting, and the cuisine is of course famous, so that there is really nothing to mar the pleasure of a visit to these interesting spots. It is perhaps unnecessary to say also that one should take with him a text of the *Gallic War*, detailed plans of each locality, and notes made in previous study. A good set of bicycle maps, one for each department of France, is obtainable at the Librairie Néal, 248, Rue de Rivoli, Paris.

Before leaving Paris the traveler should not fail to see the very

instructive museum of St. Germain-en-Laye, situated twelve miles northwest of Paris and easily reached by steam tram, where are preserved the finds of excavations at Bibracte, Alesia, Uxellodunum, and other Cæsarian sites. There are also models of Roman engines of war, inscriptions, and reliefs in original or in cast illustrative of the Gauls and Gallic customs. Here may be seen also the coins



FIG. 1.—West end of Alesia, from the Plain of Les Laumes

found in the trenches of Alesia, 619 in all, of which 487 were Gallic, 103 of these being Arvernian; one bears the name *VERCINGETORIXS*; others are inscribed *EPAD* for the chieftain, Epasnactus. The finds at Alesia include also spear-heads, swords, javelin points, javelin butts, the *stimuli* mentioned by Cæsar,<sup>1</sup> and the famous silver vase, which was discovered in 1862 in one of the trenches of circumvallation in the plain of Les Laumes. Several pieces of pottery from Bibracte are inscribed, some with Greek letters, which recalls Cæsar's note<sup>2</sup> relating to the Gaul's knowledge of the Greek language.

<sup>1</sup> *B. G.*, VII, 73.

<sup>2</sup> *Ibid.*, I, 29.



Les Laumes, the station where one alights to visit Alesia, is a small town on the main line of the Paris-Lyons railroad. The train traverses a fertile region, in early summer yellow with fields of grain, which in the first week of July was being harvested. These sights suggest the important and often vexatious question of food-supply that Cæsar had always to face. About half-way to Les Laumes the railway line passes through Sens, the ancient Agedincum. A high range of hills on the west makes clear the reason why this town occupied an important position strategically. Sens has figured in military annals prominently also in recent times, during the Franco-Prussian War. Farther south the country becomes hilly and rolling.

The mount of Alesia, which lies only a short distance from the station of Les Laumes, is reached by a broad carriage road passing through the small village of Alise-St. Reine on the southwest slope of the hill. The first impression one has on arriving at the top is of the extent and magnificence of the view on the north, west, and south sides. Toward the east stretches the flat plateau of Alesia; but the Montagne de Flavigny, Mont Réa, and the heights over which came the army of relief are spread out before one like a panorama. Here Vercingetorix and his besieged men stood eagerly watching for the vanguard of the relieving army. The view of the plain, "three miles long," stretching out westward as level as a table, is now partially hidden by a heavy growth of trees on the middle slopes of the hill. The second impression one has is of the certainty of the topography. No doubt is entertained of the correctness of the site. Cæsar's language is concise but exact, and can be followed without a question arising in one's mind; and, by the way, it gives one a peculiar sensation to read in this place Cæsar's own words describing the desperate struggle of which he was himself an anxious eyewitness.

A short distance back from the west end of the plateau has been erected a colossal statue of Vercingetorix, wearing the distinctive Gallic dress. The thick bushy hair and long drooping moustache give a barbaric appearance, although the features express nobility and strength. The inscription on the base reads: "*La Gaule unie, formant une seule nation animée d'un même esprit, peut défier l'univers. Vercingetorix aux Gaulois assemblés. Cæsar de Bell. Gall. l. VII, c. xxix. Napoléon III, Empereur des Français, à la mémoire de Vercingetorix.*"

The Roman line of defense was weakest at Mont Réa, as the Gauls discovered. This hill the Romans had been unable to include in their system of fortifications *propter magnitudinem circuitus*, and the camp was therefore constructed on a slope at a lower level. At present, however, at a height that seems less than that on which the infantry camps (A, B, and C of Holmes's plan) on the other hills were made, there is a nearly level plateau gently sloping upward, and a camp on this level would apparently have been as safe from attack as those on the Flavigny Heights or the Montagne de Bussy. The distance, too, from Alesia is about the same. It is possible, of course, that this slope was quite different in Cæsar's time.

The surface on the plateau of Alesia is stony, but various kinds of crops, as wheat, rye, potatoes, and hay, are grown. From the east end one gets a clear idea of the geographical features on this side also. The topography of the Montagne de Bussy and of Penneville Heights, with the two small streams, the Ose and Oserain, is at once understood.

The best view to suggest the extent and height of Alesia is obtained from the main carriage road about half a mile from the railroad station; from here the whole of the north and west sides are seen, and they look truly inaccessible. The south side is just as precipitous, the east side less so. Standing on this spot, where Cæsar's line of fortifications crossed, one realizes something of the energy and indomitable will of this general who set himself the stupendous task of constructing a double line of fortifications, thirteen miles long, all around the mountain. It seems easy to a student who traces out the line of fortifications on paper, but it looks very different when one is actually on the spot.

A branch line of the Lyons railroad runs in about three hours to Autun, the ancient Augustodunum, formerly believed erroneously to be the site of Bibracte. There is now no doubt that this stronghold was situated on the height of Mont Beuvray, about fifteen miles west of Autun. This may be reached by carriage or wheel, procured without difficulty at Autun. Mont Beuvray, on which was once Bibracte, the capital of the Ædui, is impressive because of its height (over 2,500 feet) and because of the picturesqueness of its location. It is rightly called a mountain, for, though it stands in a semi-

mountainous country, it rises above its fellows and is visible for many miles. Its impregnability may account in part for the prestige the Ædui enjoyed in Gaul. It was the *oppidum Aeduorum longe maximum et copiosissimum*,<sup>1</sup> *apud eos maximæ auctoritatis*.<sup>2</sup> Cæsar made it his headquarters in the winter of 52-51 B. C.,<sup>3</sup> and the council was held here at which Vercingetorix was chosen chief.<sup>4</sup> The mountain is higher toward the north as one sees it silhouetted against the sky, a large clump of trees appearing about the middle of its length. In fact, a large part of the mountain and surrounding district is densely wooded, chiefly with fine old chestnuts. "Between St. Léger and the mount there is scenery of almost unimaginable richness, and wooded slopes that look like some poet's dream of Arcady."<sup>5</sup> On the top is a small open space from which one can see out on the surrounding country. Excavations undertaken on the summit and slopes of Mont Beuvray by M. Bulliot, chiefly during the years 1867-70, brought to light extensive remains of a large city—walls of fortifications; roads; public buildings, including a temple; private dwellings; places of work and business, as a blacksmith's shop and an enameled establishment; and small objects of every kind, as coins, bracelets, fibulæ, rings, spoons, stone ornaments, vases, and objects in iron, as knives, keys, spear-points, swords, chains, etc. Most of the latter are now in the Musée St. Germain. Of especial interest were the city ramparts, which were almost everywhere distinctly traceable. In some places where the slope is not so steep there was also an inner fortification. The mode of construction of the rampart wall corresponds with Cæsar's description of the walls of Avaricum.<sup>6</sup> Beams of wood alternated with courses of stone with earth for filling. These beams were fastened to other beams running parallel with the wall and to upright beams by means of nails; remains of the nails have been found. At the city gate the walls bent inward, making a narrow entrance; this was evidently for better defense.

<sup>1</sup> *B. G.*, I, 23.<sup>2</sup> VII, 55.<sup>3</sup> VII, 90; VIII, 2, 4.<sup>4</sup> VII, 63.

<sup>5</sup> Hamerton, *The Mount and the City of Autun* (London, 1897), pp. 26, 27, a very interesting book which shows a sympathetic appreciation of the ancient life. It gives an excellent summary of the results of the excavations. "The Antiquary" is M. Bulliot (died 1892).

<sup>6</sup> *B. G.*, VII, 23.

More than two hundred buildings were excavated, most of which were well preserved, the walls of the houses being high and the floors hard.

Bibracte had a good water and sewage system. There were at least twenty-two perpetual springs within the rampart, some of them very abundant. The visitor is disappointed in not being able to see many of the ancient remains, but by an agreement made with the owner of the land the excavated sections of each year were filled up again. This is in reality much better, for, as Hamerton points out (pp. 41, 42), the uncemented Gallic walls could not stand the effects of the rigorous weather, and the loose stones if exposed might be easily carried off. The official publication of these excavations is found in the *Revue Archéologique*, Vols. XX-XXIV (1869-72).

To reach the battlefield of the Helvetians<sup>1</sup> it is necessary to go first by rail from Autun to Étang; from Étang a steam tram line runs down the valley of the Arroux to Toulon, whence a branch road is taken to the station of Montmort. This station is near the "mill pond," and is a little more than a kilometer from the village of Montmort. A wheel can easily be rented at Toulon, if one wishes to explore the neighborhood. Five kilometers from Toulon on the Luzuy road is the "mill pond," which, according to Stoffel's calculation, occupies a portion of the site where the Helvetians were encamped. This pond is fed by a little stream, a tributary of the Arroux, and furnishes power for a small grist-mill. The country about, though hilly, is very interesting. The land is fertile, and the fields in summer are variegated by the colors of the different crops which the French peasant usually grows in long and comparatively narrow strips. At the time of my visit (July 8) the laborers were in the fields harvesting the grain.

A kilometer north of the "mill pond" lies the poor village of Montmort. Near here is the *point de vue*, whence is unrolled the whole panorama of the field where that desperate battle was fought; there are the *proximus collis* (plateau of Armecy) and the lower land between, along which the Helvetians came in their terror-stricken flight. Naturally one reads the description here with more than ordinary interest and understanding. The phrase *latere aperto* gave

<sup>1</sup> B. G., I, 24-26.

me no trouble. The slopes are such that it is entirely reasonable to suppose that the Boii and Tulingi executed a right-flank movement; that is, they moved around (south of) the Roman line so as to attack them on the right or *exposed* flank.

All doubt as to this being the correct site of the battle of the Helvetii was removed in 1886 and the years following by the excavations of Stoffel<sup>1</sup> on the plateau of Armecy. A crescent-shaped intrenchment was discovered here, apparently made for temporary use. Three years later excavations were made at Montmort revealing Gallic remains. With a wheel one can return by the Toulon road which skirts the plateau of Armecy on the north.

The steam tram line continues from Toulon-sur-Arroux down the river to Digoin, whence Clermont-Ferrand can be reached by way of Moulins in from three to four hours. Six miles south lies the famous rock of Gergovia. A whole day is needed to explore this interesting place. Because of the steep grades a wheel would hardly be practicable, except in returning. A good carriage road leads from Clermont-Ferrand (leaving by the Issoire road) to Romagnat, a distance of 4.8 kilometers, from where a steep path ascends to the top. From one and a half to two hours are required to walk this distance. La Roche Blanche may easily be reached from the south side of the plateau in one-half to three-quarters of an hour; and from these two sites the whole ground can be studied very satisfactorily.

The plateau itself is an almost perfect rectangle, and its surface is cleared and under partial cultivation. On the north side the hill is nearly precipitous, precluding all possibility of attack there. This is true also of the east side. The country is wonderfully beautiful, and there is an added element of interest in the thought that from his childhood Vercingetorix was familiar with these views. The whole district is volcanic in origin; in consequence it contains many peculiar dome-shaped hills and mountains, called by the French *puy*s (Latin *podium*). In the vicinity are the Puy de Mont Rognon. Puy de Jussat, Puy Giroux, and others. The most striking of all is the Puy de Dôme, about eight miles to the northwest. Such is the height (2,440 feet) of the plateau of Gergovia that all the surrounding geographical features of hill and road and town (Clémensat, Romag-

<sup>1</sup> *Guerre civile*, Vol. II, pp. 439-52.

nat, Aubière, Beaumont, Ceyrat, Clermont-Ferrand) are spread out before one as if on a great relief map. On the west the heights of Risolles, now partially wooded, and the *col* of land connecting it with the plateau are easily identified. The north slope of the *col* is not very steep, and it would be possible for a body of men to climb up it. Such a military movement would be difficult, however, and probably Cæsar would never have attempted it. But his feint at scaling this side at any rate frightened Vercingetorix, and the ruse was successful. On the extreme east of the plateau a monument was erected in 1900 to the memory of Vercingetorix. It is a curious three-sided structure, the triangular entablature being supported by three pillars. On the summit is a Gallic helmet. On one side is the inscription:

### GERGOVIA

IN HIS LÖCIS DUX ARVERNORUM

VERCINGETORIX

CAESAREM INVADENTEM PROFLIGAVIT

A descent is easily made on the south through the village of Gergovie and over to the hill above the town of La Roche Blanche. This rock terminates on the south in a sheer precipice; on the other sides it slopes away, but more gradually on the north (toward Gergovia). The view from this hill is also very wide. On the south extends the long regular ridge of the Montagne de la Serre. The town of Crest seems very near; in fact, when I first saw it from the height of Gergovia, I supposed it was the village of La Roche Blanche. The Auzon, a small stream about like the Ose, flows at one's feet. On a clear day Vercingetorix could have seen perfectly the supposed Roman legionaries noisily making their way up the Auzon, as if with the intention of seizing the heights of Risolles. From the precipice above La Roche Blanche I could with the naked eye distinguish men who were working in the vineyards on the slope below Crest. I could also without a glass see workmen on the upper levels of Gergovia. Cæsar's attention could therefore be at once attracted by the absence of men from the *col*. Nor is it true that the Puy de Jussat would hide the operations on the Risolles, for, standing lower down within the line of the Roman fortifications, as discovered by Stoffel, I could see perfectly the whole extent of the *col* and the

greater part of the Risolles. If one stands farther up, this is of course impossible. On the south side of Gergovia, where the fighting took place, the slope descends in a series of terraces, on which a body of men could easily intrench themselves. These slopes, however, are steep, as one realizes in climbing them for himself, when he is quite ready to applaud the bravery and undaunted spirit of the Roman soldier in advancing over so unfavorable ground. On the southeast corner projects the low spur over which came the auxiliary forces of the Ædui and broke upon the view of the startled Romans. All these geographical features are easily distinguished from La Roche Blanche, as also the site of Cæsar's large camp to the east and its relation with the small camp upon this height. The sensation can better be imagined than described of reading on this spot nearly two thousand years afterward Cæsar's own description of the stirring events which took place here beneath his very eye.

The memory of Vercingetorix still lives and is revered in the country of the Arverni. The people speak his name; a monument stands, as I have said, on the plateau of Gergovia to recall his greatness; and another was erected in 1903 à *Vercingetorix* in one of the principal squares of Clermont-Ferrand. The latter represents the hero on horseback riding over a prostrate Roman and turning about to encourage his followers. The statue, by Bartholdi, is mounted on a pedestal supported by six columns which are adorned with round shields.

From Clermont-Ferrand, by way of Thiers and St. Etienne, one regains in a few hours the main line of the Lyons railroad at Vienne, after passing through some of the most striking mountain scenery of France.

The student of Cæsar who has more time at his disposal will find it not difficult to visit other places of importance; for example, the sites of the battle at the Sambre (at Hautmont) and the battle at the Aisne (near Berry-au-Bac); the hill of Plettig, near Epfig, where the conference between Cæsar and Ariovistus took place, and Ostheim, near which the final conflict occurred; Besançon, the ancient Vesontio, interesting because of its location, but, since it is now a fortress of the first class, not wholly accessible; the valley of the Rhône from Geneva to at least the Pas de l'Écluse; and the Saône from Lyons north to Mâcon.



Another locality on the direct line of travel from London to the continent, which ought not to be omitted, is the district about Dover (England) and north along the coast to Deal. The chalk cliffs which prevented Cæsar's landing extend on either side of Dover for miles, rising precipitously above the strand for 350 to 400 feet. In crossing from Dover to Calais a good view is obtained of the cliffs from the sea, as they stand out conspicuous by their whiteness.



FIG. 2.—The Chalk Cliffs at St. Margaret's Bay

There are two places only along this stretch of white rock where there is a break, or rather indentation, which might make a landing possible. These are at Dover, and at St. Margaret's Bay four miles and a half northeast. The city of Dover is situated in a narrow valley which extends for a short distance inland; at St. Margaret's Bay also there is a narrow strand of perhaps fifty yards. But in both places the rocks rise steeply, though farther back, and any sensible general scanning the coast from the sea, whence both indentations are plainly visible, would never think of landing an army at either place, especially if a hostile army were posted above.

The ascent to Dover Castle (on the north side of the town) is arduous, but from there the country stretches away nearly level



toward Deal, so that the Britons might very well have followed along the shore as Cæsar's vessels slowly sailed northward in search of a landing place. One can walk by a footpath along the edge of the cliffs the whole distance from Dover Castle to Kingsdown. The view seaward is fine; on a clear day the coast of France is visible. Below, the beach is pebbly, which makes walking difficult; besides, on account of the tide, walking on the beach would not, I think, be practicable, at any rate from St. Margaret's Bay north. At Kingsdown the cliffs, though still precipitous, begin to diminish in height and to recede from the shore, leaving a strand of from 350 to 400 yards wide. At Walmer Castle, a short distance away, the cliffs disappear altogether, and from this point to Deal, and on northward and for miles inland, the country is level or slightly undulating. At any point north of Walmer Castle, and quite likely only a little north of it, Cæsar landed and drew up his ships. The district is fertile and under cultivation, grain and hay being the prevailing crops. The return to Dover may be made by train.

## THE ELECTIVE SYSTEM IN PUBLIC HIGH SCHOOLS

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The contemporary discussion concerning the elective system for public high schools suggests the exhortation of a negro cab-driver. Glad of the lightning which showed him the road, but terrified by repeated peals of thunder, he cried: "O, Lord, if it's all the same to you, send us more light and less noise." It is only with the hope of revealing some light on this problem that one is warranted in making more noise.

Whether free choice should begin in the first year of the public high-school course is a question concerning which there has been much writing, some thinking, and a little scientific investigation. Many individual opinions have been given; the arguments on each side have been partly stated, some evidence has been presented, usually without consideration of its full bearing on all phases of the question; but has anyone sought to discover the truth through bringing together all the arguments on both sides and viewing them in the light of facts? I have found no such attempt. My present purpose is to make that attempt, first of all through reducing the arguments of both sides to their lowest terms, in order to see in brief compass just what are the vital differences of opinion; and, second, through considering those issues one by one in connection with the investigations I have made concerning the working of the elective system in the United States.

First, then, what is said against the elective system for public high schools. The arguments may be considered conveniently in four main divisions: the first concerning the ability of high-school pupils to choose; the second concerning possible compromises between complete election and complete prescription; the third concerning the effect of each system on teachers and principals; the fourth concerning the relative moral worth of the old system of prescription and the new system of election.

The first of these arguments contends that those in charge of the schools can choose better for all than can each individual pupil for himself. This is held to be true for three reasons: (a) there are certain studies which are essential for all pupils, of which Latin, algebra, geometry, and English are often urged; (b) pupils will not of their own choice elect these necessary studies; (c) pupils will choose foolishly, for they will elect easy courses, or those for which they are not prepared, or those taught by favorite teachers, or those of little value, or disconnected courses.

As a second main argument, two compromises are proposed, either of which is held to be superior to the elective system in its entirety. Since there are certain studies which constitute an essential foundation, and since pupils, left to their own choice, will neglect these studies, a program of partial prescription or a group system seems to many people far better than "a frolic of unbridled fancy." Such is the name applied to the elective idea by an extreme opponent who refuses to call it a "system."

Of those who favor partial prescription, some would have the greater part of school work required and allow the pupil to choose only the "fringe." Others would establish a system of restricted choice, requiring the pupil to take at least one study from each of the great divisions of human knowledge—say language, history, mathematics, and science. The other suggested compromise, called the group system, offers several complete programs of studies, one of which the pupil must elect; but the studies within each group are wholly prescribed. The argument in favor of this system is that each pupil, whether preparing for college, for technical school, or for business—whether wishing a classical, scientific, or commercial course—can elect one well-planned group of related studies. Many believe that thus the benefits of the elective system are secured and its evils eliminated.

A third argument opposed to the elective system concerns teachers and principals. It is held that this system requires abler, more enthusiastic teachers, more competent and sympathetic principals, stronger men and women; that, further, the system demands of them more work. On this point, other friends of prescribed study urge that the free-choice system is a device to evade the most difficult

work of teaching, a lazy, *laissez-faire* policy; for it tends to relieve teachers of the very pupils whom they have most difficulty in forcing through a prescribed curriculum.

A fourth main argument is that the prescribed system is of greater moral worth. "What a boy likes," it is said, "is not always best for him," and "backwardness in any subject shows the desirability of more training at just that point." The drudgery of enforced tasks and the discipline in conquering distasteful subjects is more valuable than any training in free choice, and only prescribed work cultivates habits of application, thoroughness, and accuracy.

These four objections do not by any means comprise all that has been said against the elective system. The arguments have been too intricate and numerous, have wandered along too many divergent paths to be gathered into four folds. The friends of the fixed curriculum have also urged (1) that most public high schools are too limited in resources—in teachers and equipment—to make possible a program of free choice; (2) that there are dangers of superficiality in the so-called "enriching" and "broadening" of lower-school programs; (3) that absolutely unrestricted choice is impossible, since there are so many hindrances to its free play; (4) that the elective system throws upon busy parents an added responsibility, one wholly assumed by school authorities under the old fixed plan; (5) that the elective system cannot put a stop to all educational wastes.

Indeed, so many have been the invectives against the elective system, so diverse have been the attacks, that it is no simple matter to extricate the specific objections. As far as I know, however, all the arguments which have been advanced seriously are now before us in five divisions. The necessity of such an arbitrary arrangement, and the reason why I have grouped the last six contentions in a fifth division, will become clear through an examination of the other side—of the arguments which favor complete freedom of choice in all our public high schools.

The arguments adduced in support of the elective system may be considered in six groups, the first four of which will be seen to correspond with the first four opposing arguments stated above: (1) those concerning the relative ability of the individual to choose for

himself and the ability of the school authorities to choose for all; (2) concerning the proposed substitutes for complete election; (3) concerning the effect of each system on teachers and principals; (4) concerning the relative moral worth of the two systems; (5) concerning the interest of pupils in their work; (6) concerning several particular needs of public high-school education in the United States.

The first argument in this order is that throughout the United States each high-school pupil is better able to choose for himself than are school authorities for all alike. This is held true for three reasons: (a) there are no studies which are essential for all pupils; (b) few students omit the subjects most commonly defended by advocates of fixed courses; (c) there are many natural safeguards which together inhibit most of the mistakes of choice feared by the opponents of the elective system.

The second argument holds that no other plan is so satisfactory as complete election. The group system (when its only distinct feature is preserved) is too rigid to provide for individual needs, and is an attempt to *enforce* specialization. Nor is any system of partial choice so satisfactory as complete election. A few options will not give the necessary advantages. Furthermore, elective and prescribed work side by side are incompatible. Finally, a partially elective plan will not do, for free choice should be given in the first year of high school, that the opportunities may attract grammar-school graduates who are deciding whether to enter the high school; free choice should come at this time, when the inevitable errors of training in choice are least harmful.

A third argument is that, under the elective system, teachers and principals are relieved of the most disheartening kind of work, and inspired with a more sympathetic and enthusiastic attitude toward their work and their pupils.

A fourth is the moral argument. The elective principle is considered strongest for building character, because it honors the will, trains in choice, removes the dangers of habitual dependence, decreases the amount of cheating, helps to break the demoralizing educational "lock-step," and aids in developing good citizens. Furthermore, in reply to a common objection, the friends of election say that there are two kinds of drudgery, and the only kind which has moral strength

is as surely found where all studies are elective as where all are prescribed.

Closely related to the question of moral worth is a fifth point: the elective system arouses the interest, willingness, and enthusiasm of pupils, as no other system can, whereas prescription makes many pupils disparage the very studies which it seeks to dignify.

A sixth group of arguments in favor of the new system deals with several present needs of public high schools in the United States, which, it is held, only the elective system can satisfy. One of these is the need of arousing the interest of parents, and thus securing more sympathetic co-operation of home and school. Another is the need of a system by which our school buildings can be used more hours of each day, and thus be made to accommodate more pupils. A third is the necessity in a democratic community of recognizing the wide diversity in the needs of pupils, and thus providing for all classes of society. A fourth is the need of increasing the percentage of the population that secures a high-school education, both by attracting more pupils and by keeping them longer in school. Such present demands, which the people rightfully make of their schools, no prescribed curricula can so nearly satisfy as the plan of complete free choice.

Here, then, are the arguments of both sides, stripped of all their finery and set side by side for the sake of comparison. It is clear that the two sides meet with a definite clash on the first four issues.

The questions, therefore, which must be decided, the issues on which the advocates of the new system must win or lose their case, are these four: (1) Whether each pupil can choose better for himself or school authorities for all; this in turn depends on (a) whether there is a common ground essential for all pupils; (b) whether with freedom of choice pupils will avoid this common ground; (c) whether there are a sufficient number of safeguards to prevent unwise choices. (2) Whether the group system or any system of partial election has sufficient advantages to offset those of the elective system. (3) Which plan is better suited to secure the interest, sympathy, effective work, and happiness of teachers and principals. (4) Whether the moral benefits of drudgery, of conquering distasteful subjects, of submitting to authority, acquiring habits of persistence and accuracy,

which are claimed for the prescribed system, outweigh the moral worth of training in free choice which is claimed for the elective system. Such are the four main issues.

Above and beyond these, on which the two sides clinch, other arguments are advanced on both sides of the question. What is their bearing? If they are beside the point, we can discard them at once; if they are germane, but incontestable, we must keep them in mind as truths to be reckoned with; but in any event, since they have all been brought forward repeatedly in connection with this subject, we must give them fair consideration. We may well do so before we examine the main issues.

In an overlapping group we included the objection that the majority of public high schools are too limited in teaching force and equipment to introduce elective studies; and another objection—the danger of superficiality in the so-called enriching and broadening of lower-school programs. These two matters are continually and often evasively slipped in among the arguments against elective studies; but if this bare, perhaps wearisome, analysis of the question serves any purpose, it helps to make clear that these two points are not germane, but beyond the limits of the present subject.

They are extraneous, because, as regards the first objection, it is obvious that schools which can offer only one complete course are not concerned with the matter of election; such schools fall beyond the scope of this discussion until they are able to extend their curricula. Likewise, concerning the second objection, however important it may be to recognize the possible dangers in enriching and broadening the programs of the lower schools, the question does not concern the *election* of studies. This point is important. If there are any subjects which are worthless, out of place, or superficially taught, they are so whether they are imposed on the pupil or left to his choice. The real fault is that they are in the curriculum at all. These two matters, therefore, may be safely banished from the real issues.

The arguments against the elective system further include two contentions: first, that unrestricted election is impossible, since there are so many hindrances to its free play; second, that the elective system throws on busy parents a responsibility hitherto wholly assumed

by the schools. Surely these two points concern us vitally; but, so far as I know, they are admitted by everybody. So much is common ground. The last objection mentioned above—a kind always urged against any reform, namely, that the new system will not put a stop to all educational wastes—is conceded by all its defenders.

There remain, beyond the clash of opinion on this question, the two additional arguments already outlined in favor of the elective principle; namely, that it arouses the interest of pupils as no other system can, and that it responds more effectively than any other plan to several important needs of modern public schools.

In thus defining the question and ruthlessly narrowing the issues, as I have done in a somewhat arbitrary way, and in seeking a clear path among opinions, assertions, and generalities more or less connected with the subject, I have found considerable drudgery and many a lesson in patience; advantages, by the way, which, some people contend, go only with enforced work. On some aspects of this matter only opinions can be given; on others, sound reasoning; on still others, the results of scientific investigation. Such results are most valuable, for, in dealing with questions concerning which the organization of contemporary educational experience gives facts, it is an old and pernicious habit to guide practice by mere individual opinion. On such questions your opinion is as good as mine, mine is as good as yours, and the chances are that neither is worth much. Consequently, wherever I have found it possible to collect specific evidence on any phase of the subject at hand, I have done so, with the result that my own attitude toward the question has passed from doubt—a good old-fashioned doubt—to the conviction that in all the public high schools of the country the studies should be wholly elective.

Whatever differences of opinion there may be concerning the value of the elective system, no one can deny that its progress—like that of reform everywhere—has been slow and painful. At every turn it has met a stone wall of conservatism. For one educated under the old prescribed régime, and indoctrinated with the venerable idea of what constitutes a liberal education, it is difficult to eliminate the personal equation. Scholars cling naturally to old ideas, old ideals,



old methods; no body of men is more stolid, more averse to change. In business such men fail, driven to the wall by competition with those who are ready to adopt new methods. But education fosters conservatism; as a rule, men prefer to teach the things they were taught, and to teach them in the same way. So the mistakes of fathers are visited upon children and upon children's children, unto how many generations only the history of education can tell.

Just at this point the reply is made that in all ages conservative forces have been valuable safeguards to progress. True, conservatism often means needed restraint; it curbs and tempers the ultra-radical. In education, however, conservatism has oftener meant stagnation—a fact so conspicuous that not even the most ardent opponents of the elective system venture to deny it. Nearly every progressive step has been made against violent, prolonged, and often vicious opposition. For hundreds of years schoolmasters kept their backs to the future, and vainly endeavored to ignore the crying demands of the present. We congratulate ourselves that we have now turned about; that with every effort to think clearly and independently we are feeling the pulse of present need and striving even for glimpses of the future. Shall we not, then, in all fairness to the friends of the new, as well as to ourselves, endeavor to look on this question without prejudice?

The elective principle can be justified in the first consideration only by proving that each pupil is better able to choose for himself alone—not for any other pupil or for the fictitious “average boy,” but for himself alone—than is any individual, however wise, or any body of men, however experienced, to choose for all pupils. This proposition is fundamental. To it the advocates of prescribed studies reply that certain studies should be required of all. At the risk of wearisome repetition, I reduce their argument, for the sake of clearness, to this syllogism:

First, there are certain studies essential for all pupils in public high schools.

Second, students left to their own choice will not elect those studies.

Conclusion: therefore those studies should be prescribed.

If either premise is false, the conclusion does not follow.

First, then, is it true that there are studies which should be required of all pupils in public high schools? Are we sure that any subjects naturally belonging to high-school years should be forced on all pupils, boys and girls, rich and poor, weak and strong, bright and dull, regardless of their aims, aptitudes, desires, ambitions, temperaments, capacities? It seems at least doubtful. In these important respects no two individuals are alike. We need no master of psychology, no profound student of education, to tell us that each high-school pupil is an infinitely complex organization, the duplicate of which does not and never will exist. By heredity and by environment he differs widely from all other human beings in passions, adaptabilities, emotions, desires, powers, health. In no other creature are they associated as they are in him. His will-force, enthusiasm, interest, moral purposes are aroused and used in ways wholly his own. In the rate of physical development, in bodily endurance, in home influences, in time of entering school, in regularity of attendance, in future possibilities—one could stretch out this enumeration to the crack of doom, for in an endless number of particulars each individual is unlike all the others in any school. What then, shall we attempt to cast this mind into one mold with all others, and subject it to the same treatment, the same work, the same tests, the same influences for the same length of time? Shall we, in prescribing for our own children, neglect the universal principle of endless diversity, and plan our public high-school programs for a purely imaginative child—the “genus homo,” the “average high-school pupil”—who never did and never can exist? If so, we must inevitably neglect all the species, all the living potentialities, all the vastly dissimilar individuals who knock at the doors of public high schools in a democratic community.

[To be continued]

## VOLUNTARY READING IN ELEMENTARY SCHOOLS<sup>1</sup>

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The reason why I stick to child-study through thick and thin, notwithstanding its crudities, its oddities, its futilities—the reason why I still stand up for it and urge it upon my students, is because it is the only antidote I know of against the vitiated atmosphere of our profession; vitiated constantly, inevitably, like the lead-poisoned air that house-painters have to breathe, by the assumption that human beings in their mental endowments, especially in early years, are substantially alike. It is the practical ignoring, in our popular education, of the fundamental fact of individuality. Our classifications, our courses of study, time limits, examinations, rankings, classes, diplomas, all tend to blind us and paralyze our common-sense, insomuch that, although we know better, we still act and talk as if we didn't, as if we really believed that the meager pharmacopœa of pedagogy contained a sovereign remedy for every mental ill or defect. Now, with all its imperfections on its head, child-study does tend to open one's eyes to human individuality, quite as marked in children by the way, as we had the trick to see't, as in ourselves, probably more so. Systematic psychology, from the very fact that it *is* systematic—that is, that it dwells *more scientifico* on the qualitative resemblances that constitute mankind a genus, and thereby leads the student straight away from those quantitative differences, the more or less of our various faculties or endowments that stamp every one of us with individuality and entitle each to a local habitation and a distinctive name—psychology as a science, I say, especially in the hands of a young student, may easily do him more harm than good. It is not the fundamental ingredients, so to speak, that analysis finds in human nature as a whole, it isn't *that* that the teacher most needs to

<sup>1</sup> Read at the meeting of the New England Association of Teachers of English, November, 1904. The general topic was "Voluntary Reading: Can it be Related to School English?"

know; it is the proportions in which these ingredients enter into combination; not so much the permanent *what* that constitutes our common humanity, as the ever-varying *how much* that determines our individual personality. Classify children as we will on their qualitative resemblances to one another, we never thereby get a step nearer to the quantitative differences that always distinguish John from Peter and Mary from Martha. Psychology makes them all human, and inferentially alike; the pedagogy we need will recognize wide and insurmountable differences between them. These differences, as I said, we ignore; or if we are compelled to accord them recognition theoretically, we minimize or wholly disregard them in practice. Just as certain savages, we are told, cannot conceive of death as a natural process, but always regard it, at whatever age, as due to some malign influence from without, so we teachers are wont to attribute the failure of our pupils to realize the ideals and aims that have guided our instruction, to faulty methods or untoward external conditions rather than to inborn and irremediable defects or idiosyncrasies in the pupils themselves. Now, physicians do not accept the imputation of malpractice whenever a patient grows worse or dies in their hands; the only physician I ever read of who undertook the responsibility of restoring the dead to life was Æsculapius, and he lost his own, you remember, by the practice; the captain of a wrecked ship is not, as a matter of course, discredited on account of the disaster to his vessel; no one thinks the less of the generalship of Lee because of his final surrender. But somehow, if failure is discovered in reaching the lofty aspirations of our formal education, we seldom hesitate to charge all upon the teacher or the method. Take this subject of English—and I know no better illustration of the point I am trying to make. I have read lately several pungent articles in the magazines deploring the failure of our schools and colleges to accomplish what they are evidently striving to do, namely, make all their pupils facile and correct users of English and lovers of its best literature. Not one of these earnest gentlemen, I think, betrayed the slightest recognition of the sheer impossibility of the undertaking. The articles were one and all pitched in about the same key, a minor for the most part, in view of such meager results as are everywhere to be seen, and which, it was implied, might have been expected from the stupidity or per-

versity of the methods employed; but the strain was finally modulated into a more cheerful major as the writer confided to us the encouraging prospect that all this might be changed and success achieved by means which he had "up his sleeve." The community seems to expect of us some device or expedient whereby all our pupils may be made, if not to lead their class, at least to stand well above the average; and the worst of it is, we ourselves appear to have accepted and indorsed this demand as reasonable, and to take blame to ourselves and lavish it upon our brethren when there is failure to meet such absurd expectations.

One trouble is that we are all specialists, with an unappeasable yearning to make our specialty the endowment and possession of all mankind. The music-teacher thinks everybody ought to sing and to play at least one instrument; the publicist feels that every youth should be taught the institutions of civil government under which he lives; the man of science believes it indispensable for the young to form correct habits of observation and inference in dealing with natural phenomena; the business man says that all young people should be well grounded in the theory and practice of accounts and business forms and usages; the scholar thinks it a shame for a person to go through life knowing but one language; and so on indefinitely.

But is this a large or reasonable frame of mind? Who is sufficient for these things? What sort of a creature would a universal specialist be, such as I fear most teachers would like to make of every child born into the world? Herbert Spencer, I venture to say, saw nothing to smile at when he wrote, reproachfully, that there are men who would blush if caught saying *Iphigēnia*, but would show not the slightest shame in confessing that they do not know where the Eustachian tubes are. Suppose you know where they are, what can you do about it? Must everybody be an accurate anatomist? Must everybody know everything that anybody knows?

Now, I believe that nearly every subject studied in our schools and colleges at the present day may fairly be considered a specialty, and that a special aptitude is requisite to gain a mastery of it. But what proportion, think you, of the people one meets in an hour's walk through the principal streets of any large city, or in a day's drive in

the country, know anything whatever of science or literature, as scholars understand the meaning of those words? I doubt if any of us, after due reflection, put the number so high as one in ten. Well, now, my point is, where are the nine? For my part, I cannot escape the conviction, not only that the instruction which may have been bestowed upon them in those realms of knowledge has been wasted, but that any instruction or training to which they could have been exposed, under the most favorable conditions, would likewise and equally have been wasted. Your dull ass will not mend his pace with beating. Someone will say: Why send the nine to school at all, then? I answer: For the good and sufficient reason that you cannot tell beforehand, nor without ample trial, which is the one and which the nine. So both must grow together till the harvest. But don't blame the reapers or the sowers if tares do not ripen into wheat.

The term "universal education" is perhaps responsible for the notion that the mass of mankind is practically homogeneous, and that all are about equally educable. Nothing, in my judgment, could be more erroneous or more mischievous. I believe that the proportion of those born into the world capable of education, in any sense of the word not so superficial as to be ludicrous, is so exceeding small that, quantitatively considered, they would form but the thinnest crust, the merest pellicle or film, upon the mass of the race. I believe that the conceptions of science, the appreciation of literature and art, the comprehension of government, the power of invention, the faculty of direction and control, or even the aspiration toward these things, reside in the few, and are as foreign to the great majority, even in civilized lands and in the great centers of population, as is the power of flight. *And yet* I would abate nothing of the opportunities, nothing of the facilities, offered to children and youth for enlarging the scope of their minds and cultivating to the fullest extent every talent with which they may be gifted. I am proud of the spirit of our people, that has attracted, and is increasingly attracting, the attention of the civilized world to its multiform and effective educational work. I am reluctant to admit the justice of the term "superstition" which Professor Wendell applies to it. Still, it is clear, I think, that our free schools, day and evening—almost a "continuous performance," in fact—with their free textbooks and stationery; our compulsory-attendance laws,

with truant officers to go out into the highways and hedges and compel children to come in; our free public libraries almost in sight of one another; our printing-presses "whose sore task does not divide the Sunday from the week," turning out readable editions of the classics for a few cents a volume; and, more potent than all, the fact that education with us has come to be, as Emerson says, "the word of ambition," that it is the fashion, the test of respectability, almost of decency—this prodigious, all-sided atmospheric pressure has swept and forced and jammed into the schools thousands upon thousands who have no business there, but whom it is impossible to weed out and get rid of. It is right and proper that all children should be received with open arms into the lower grades, that they should be taught, even wooed, by the most skilful and seductive teachers, that they should be generously tested and promptly promoted as they are found fit. But this, it seems, will not answer. They must be pushed and squeezed up and up until not a few of them, by hook or by crook—mostly by crook—at length stand in line and take their diplomas in our colleges and professional schools. What is fondly called the "education" of such is but a mask, a simulacrum, and implies no real culture whatever. I wonder how many decades must pass before a frank and general recognition of this great fact shall relieve our schools of the heaviest incubus that now clings to them, impeding their work and dragging them down. As one condition of such a millennium, educators must come to their senses and cease to harp upon faulty methods and unskilful technic as the only thing that stands in the way of making all children alike and enabling every pupil to rank in the first third of his class. It is discreditable to our intelligence to stand in such an attitude.

I come now to the question immediately before us. In order to fortify myself with fresh facts, I appealed to the experience of about one hundred and fifty of my teachers and students as to their voluntary reading in the period of childhood from eight to twelve. They represent, of course, a selected body, all being graduates of high schools, and a few of colleges. As compared with all the children of the community between the ages indicated, the contributors of my facts would be, in point of intelligence, far above the average. They were asked to state, first, the character and extent of their

voluntary reading during those four or five years; secondly, what had attracted them to this reading, and what they found in it; and, thirdly, whether it was connected with or suggested by their work in school. From their testimony it appears beyond question that a very large amount of reading was done by nearly all at this period; that much, if not most, of it was done at random and as a matter of course, with little discrimination or reflection, and little obvious effect upon mind or character. The motives leading to and sustaining it were various. First, perhaps, the great abundance of reading matter surrounding the child on every hand and pressed to his very lips—books garnished with pictures; books received as presents, and therefore imposing some obligation to read them; books recommended by parents, teachers, and especially by associates; books read from pride or vanity to seem acquainted with what was in them, and talk about it; but most of all, I think, books read from genuine, though superficial and transient, interest. This interest revealed two pretty well-marked types of mind, as to susceptibility to the influences of literature: one I may call the poetic or imaginative type; the other, the prosaic or matter-of-fact. In many individuals there was, of course, more or less blending of the two, but in others a distinct and often wide separation appeared. Fables, fairy-stories, extravagancies of every sort, were, by one type of mind, eagerly sought and fed upon; the opposite type rejected all such because they were not true or probable to the understanding, preferring stories of children precisely like themselves and their playmates and recording commonplace doings and happenings such as filled their own everyday lives. The latter class included some—mostly girls—who manifested a relish, sometimes perhaps acquired or reflected from their elders, for the sentimental, or the conventionally good, or the goody, or what I may call the dilute heroic.

A large majority reported that their reading had little or no connection with school, except as books from the public libraries were sometimes distributed by the teachers. But a minority traced their interest in many good lines of reading to stories or selections read or suggestions given by their teachers. This seemed to be on the increase; that is, a larger proportion of the younger than of the older students and teachers referred to this source.



Two conclusions I am reluctantly compelled to draw from these reports: First, that a large proportion of the mass of reading furnished our children is unstimulating, uninforming, and wholly unprofitable for the development of minds of any texture or promise; it is commonplace and without literary quality or flavor. Oh and alas! the herd of facile writers who have nothing of importance to say, and who say it in a manner devoid of distinction or reserve; who, failing to secure any adult audience, fall upon the helpless children! Oh and alas! the publishers whose only criterion and justification is whether a book can be made to sell! My second conclusion is, that there is, on the one hand, no art or method whereby children can be supplied with reading matter even tolerably adapted to their tastes and capacities; or be restrained, on the other hand, from a cloying and suffocating excess of even the best literature. The idea of restraint has taken no deep root in the community. I am compelled to believe that at the age I am now considering it is better to leave children to the guidance of their instincts, with a considerable variety of matter to select from, than to compel or urge or even recommend. I say *better*, using the comparative degree, for, so far as I can discern, the *best* way, the superlative, is not yet in sight. When we know vastly more than anybody knows now of the manifold nature of childhood, and the manifold ways in which its development into healthy maturity is effected or arrested, we may reach a solution of what is at present an unsolved problem.

If the parent or the teacher possesses two very rare qualifications—namely, love of good literature and sympathy with children—much may be done by reading aloud suitable classic stories, “without note or comment.” I must repeat “without note or comment,” and I must add, in case of the teacher, without the odious, hated afterclap of an examination or composition. For it is not in the surface froth that may be churned up by pedagogic nagging, but in the deep and silent recesses of the soul, that literature does its work. I am in full sympathy also with Professor Norton’s admonition not to attempt to make reading serve other branches of study, as is now so much the fashion. I hate the very sight of a “reader,” with a qualifying adjective that betrays its true character as a book, not of genuine literature, but of science or history or what not.

When I was a boy, it was taken as a good sign to see a child with his face in a book. Books were scarce then, and for the most part not inviting, except to the few whom they might concern. But times have changed. The deluge has come. As the season of Christmas approaches, for forty days and forty nights it rains books, and there is no ark of refuge. In the name of the children, I thank heaven that "Christmas comes but once a year." I think Mrs. Hunt makes an important omission in not including print among dangerous stimulants and narcotics, for it may be either when taken in overdoses by persons of feeble mental constitution, and especially by children. I therefore suggest that a child with the reading propensity strongly developed needs watching, like one who shows a taste for wine. Taking our whole school population, I do not believe there is more than one in ten who will be much benefited by such reading as he is likely to do in early childhood; and this mainly on account of the excess of it, which often forms a sort of glaze over the intelligence and sensibilities, or else induces a grasshopper habit of skipping from page to page in search of exciting episodes. A child or youth besotted by reading may fall into a passive habit of mind that will receive and absorb, sponge-like, any quantity of knowledge *about* things, but remain incapable and apathetic as to any active contact with the things themselves.

President Eliot says, if correctly reported, that "fifteen minutes a day of good reading would give anyone" of that class of our fellow-beings whom he seems to regard—rightly, I think—as infra-human, living, as he expresses it, in "a mental vacuum;" he says that a certain small amount of good reading each day would lift anyone of this multitude into "a really human life." Now, I cannot but think that the admirable president's own superior mind, and his long association with a highly selected class of men and women, may have betrayed him into a far too optimistic view of the educability of the lowermost strata of our people, and of the efficacy of good reading to transform a mental vacuum into a mental plenum. I should as soon think of prescribing fifteen minutes a day of scraping on the violin for one who had no ear for tone or rhythm. Do not misunderstand me. As parent or teacher I would meet every child with a reverent and expectant attitude, the attitude, almost of awe, with

which Emerson was wont to receive every youthful stranger ("This may be one out of a hundred thousand!"); but I would not, hoping against hope, stay in this attitude indefinitely, or take blame to myself without better reason than the naked fact that my pupil failed to improve. What sort of economy would it be if any agriculturist, in the varied and broken soil of New England, were to bestow, year after year, equally upon every square rod of his possession the same share of his seed, his fertilizers, and his labor?

My plea, fellow-teachers, when reduced to its lowest terms, is only for better and better discrimination in the use of the splendid means which we already possess.

VOLUNTARY READING IN THE CLASSICAL HIGH  
SCHOOL  
FROM THE PUPIL'S POINT OF VIEW<sup>1</sup>

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I trust that at the outset I am not ambiguous. I am not myself a pupil. Indeed, I regret keenly that, for the benefit of English teachers, I cannot speak from a schoolroom desk, and tell them, as a boy as well as a critic, what I think of them, of the English they give me to study, and the way they make me study it. After all, what a misfortune it is that these pupils of ours cannot hold pedagogical discussions of their own, and then report to us what they want, what they need, what in their hearts they feel! Such a privilege school-teachers never enjoy. More than lawyers, or doctors, or business men, they are handicapped by the immaturity of those with whom they work. Boys and girls cannot reason about educational systems. What concerns them is not the *why*, but the *how*; and the teacher's vital critic always remains the school committee.

Therefore I regret all the more that I am not a boy of fifteen. But I have graduated and am one of the clan; so that I can only ask the reader to forget himself, and as far as possible think of this subject as boys and girls might think, and look at it for the moment from their point of view.

Voluntary reading, as far as I have observed, today is not related to the study of English in classical high schools. Conditions are such that a relation between the two is next to impossible. What these conditions are I wish, first of all, to explain. In the second place, I wish to describe briefly a few methods of teaching college English which I have used in my efforts to meet these existing conditions, and which have, in a small way, brought about that correlation of home and school work of which we are speaking.

In the first place, there is no time. We are driven, crowded,

<sup>1</sup> Read at the meeting of the Association of New England Teachers of English, November, 1904.

hounded, as it is, by our prescribed work, to say nothing of going into other fields to gather grain of a different kind. We cannot afford to. The elective system and the increasingly greater demands of the colleges have perhaps enriched our programs, but they have also brought us to a state of utter poverty in our teaching of English. Every minute must be counted and used. Every hour must be strenuous. In the Newton High School exigencies of time and space have made it absolutely impossible for "classical" pupils to have more than two periods of English a week in all except the first, or freshman, year. These two forty-five-minute periods must serve for literature, composition work, and rhetoric. Newton, moreover, is no worse off than most cities in the East. In the classical high schools of New England the average number of recitations in English is less than three. Under such circumstances is it any wonder that teachers are willing to rest content if they do the prescribed work satisfactorily and nothing more?

But not merely do the college examinations take all the time. They themselves are narrow, exacting, petty. The questions set on papers by some of the smaller institutions are often rigid and technical to the extreme. Harvard now seems to be taking a step forward in this respect, and is giving the boy who has read and thought for himself a chance to reveal what he knows. Nevertheless, by the very nature of the tests which they give, many colleges are today discouraging, if not forbidding, that correlation which our subject suggests.

Lack of time and cast-iron examinations are serious obstacles in our way. There is another, even more fatal. Between those two parts of the boy's work which we wish to fasten together there is a wide gap, a natural chasm, so actual and so vast that I have never yet seen a real boy in a secondary school able to cross it. Not only does the teacher see this gap; from the point of view of the scholar it exists as well. I have found it in every boy's mind which I ever explored. Among pupils out of school and in classes it is constantly apparent. The average youth of fifteen or sixteen does not think of his voluntary reading and his study of literature as one and the same thing. They are as different to him as are Latin and geometry, or even more so.

I prepared for Harvard, with twenty-five others, in one of the so-called Latin schools of New England, corresponding almost exactly to the average classical high school of today. This, fortunately, was not so long ago that I have forgotten in the least how we boys felt toward the same prescribed English, with a few exceptions, that I am now teaching. Our English periods we all enjoyed. We liked the teacher. He made the hours interesting by his personality, so that they passed only too quickly. But for the "classics then on the college list" we had no natural, inborn enthusiasm. If we had shown such a feeling, I am confident that the master would have considered us abnormal and been worried. As a matter of fact, we had the same feelings for them that we had for Ovid or Xenophon, rules of French grammar, or quadratic equations. They were all our stint of work at that period of our lives, our portion of labor to do in order to get into college, whither we all were going. I do not believe that it occurred to one of us then, any more than I see it occurring to girls and boys now, that the *Essay on Burns*, the *De Coverley Papers*, and *Macbeth* were of the same stuff that made the books which we read at our homes when our lessons were done.

When the school which I attended, on some occasion or other, presented me with a copy of *Under Drake's Flag*, by G. A. Henty, an impression was made on my mind which I distinctly remember, and the result of which I still feel. At the time I was puzzled. For Henty to come to me through school seemed somehow incongruous. I did not know then what it meant. But now, looking back, I can see that really the first span of a bridge was being laid across that dismal gulf between my study of literature and my voluntary reading.

Not a month ago I saw a boy of fourteen pass through a similar experience. I had just taken from a class *The Lady of the Lake* and put into their hands Stevenson's *Treasure Island*. At the close of the hour an astonished, excited voice said to me: "I—I've read this book!" "Well, and what of that?" "Why, I didn't know we studied *this kind of a book* in school."

Such a dawning of light as this comes to comparatively few boys and girls. To the majority the idea that a book is a book, whether it be *Alger* or *Addison*, is utterly foreign; and the conception that literature is merely the best that has been written, the less good being what they voluntarily read for pleasure—that the two are really rounds

in the same ladder—such a conception is unknown until possibly the last year in school. When such is the case, with even unlimited time, what appreciable relation of the two can we teachers be expected to bring about?

Now, the only way to relate voluntary reading to English in classical high schools is to bridge this wretched chasm from the start, and to do this we must understand what are the causes of its existence. They are three in number: the nature of the voluntary reading, the nature of the English in the classical high schools, and the nature of English teachers. The boys, I am confident, are in no way responsible.

Of what, then, does this voluntary reading consist? From the honest confession of a large number of pupils I find that 91 per cent. of it is light modern fiction; 5 per cent. essays, biography, and science; a little more than 1 per cent. poetry; and a little less than 2 per cent. what we should call literature. These figures would unquestionably change with locality and environment. Yet the change would be slight; and I have often been surprised to see how closely they agree with similar statements made by many teachers from all parts of the country. The authors of this great 91 per cent. range from Marryat, Henty, Miss Jewett, Dumas, Mr. Trowbridge, through all the authors of our "novels of the day," to Alger, Standish, Winfield, Castleman, and men who have produced a dozen books poorer and weaker than the proverbial "dime novel" of the news-stand. Never, however, have I found a boy reading a book positively vicious, or in my mind wholly worthless. Eighty-five per cent. of this fiction is good, healthy stuff—not harmful, not degenerating, not wicked, and certainly not literature. To meet the problem before us we must recognize this fact. We must realize that the vast majority of our pupils' voluntary reading is simple, crude narrative, entirely lacking in literary style or spirit or purpose.

And, now, what of the classical high-school English—these prescribed college books, to which we are going to relate this mass of fiction? I am neither "an educational anarchist" nor am I "throwing stones," but merely expressing the feeling of many an English teacher today, when I say that, taking them as a whole, I am heartily opposed to them, and with their character entirely out of sympathy.

Moreover, if I were a pupil, and a teacher should ask me why I felt so bitter, I should answer somewhat like this:

"Your object, you say, is to interest me in literature and in better reading. Yet your method has been to give me, with the exception of *Ivanhoe*, *Silas Marner*, and a play or two of Shakespeare's, some of the most difficult works of that literature—in no way suited, as far as I can discover, to the tastes of boys and girls. You have given me rather books which are the very opposite of my tastes and natural cravings—essays, speeches, idyllic poetry, biography, when I want a plot, and characters, and action, and something being said.

"You not only give me such books as these, but you give them to me to study, delve and dig in, to treat as I never treated any books before, and never shall again.

"Then, if I ask you, you say that the authors which you put before me wrote for mature minds, for people who already knew what literature was and enjoyed it, not for beginners such as I. You tell me that Macaulay wrote his *Essay on Addison* for the readers of the *Edinburgh Review*, a magazine which boys like me in 1843 no more thought of reading than you yourselves expect me to read the *Forum* or the *Atlantic Monthly*. You tell me that Burke made his speech on 'Conciliation with America' before a house of lords, middle-aged, gouty men in wigs and powder, half of whom fell asleep while he was speaking; and that only of late years has it been discovered to be a suitable introduction for boys of sixteen into the golden realms of English literature.

"You tell me many other facts that puzzle me. For instance, you say that these gentlemen wrote their fine books not only for grown-up people, but for pleasure, not to be studied, picked to bits, and used as examination material! Furthermore, you confess that my older brothers who have gone before me, did not always get that love of 'better reading' which you expected, and go on reading Macaulay and Addison when they left you, but have returned, in the rush and stress of their business lives, just where I am now—to these books I like today, to good stories, with hero and heroine and villain, and plenty of talk and action.

"And now you are wondering how you can relate your classics to my own reading. You cannot do it! At least, not until you give me such classics, and teach them to me in such a way, that they will appeal to me, not as something to be connected to my voluntary reading, but as one and the same thing with it."



Such is the natural, unspoken feeling in the heart of every real boy—the unwritten protest, because he is not a critic, against these “prescribed books” which we give him. They were not meant for him to read, still less to study. They are above his reach, beyond his interests. To be sure, with our help, he can master enough facts about them to pass an examination; but their style, their spirit, all that makes them literature, he was not destined at his age to understand or appreciate. The only three pupils, in my experience, who, of their own accord and because they liked it, made a constant diet of literature, were the most unattractive, unnatural, namby-pamby girls I ever knew.

A boy is never so. He is too genuine, too sincere, too near to nature’s heart. We may treat him as a man. We may put him through a course of training and drilling unsuited to any creature, young or old, that ever existed on God’s earth. He will respond to it and react; for he is sensitive, versatile, and alert. But we shall not accomplish our purpose. We shall not *change* him. To himself, to boyhood as he represents it, he is eternally true. As Mr. Flexner has well said:

The boy on whom our system of mental therapeutics will produce the calculated effect does not exist outside of a schoolmaster’s fancy. The real boy, obscure and complicated, may detach himself for preparatory purposes (I might say, for English purposes), but the center of his being is elsewhere—untouched, untamed.

To many teachers of English, especially to the older and more conservative, these sentences will sound harsh and perhaps unreasonable. To them the “college classics” are in a way sacred, and anything so radical as I suggest must seem to them naturally sacrilegious. Indeed, I expect (and want) little sympathy from that good gentleman, or any of his kind, who told a boy of seventeen that he could not “possibly consider him an educated fellow because he had not studied Macaulay’s Essays.”

Some will remind me, furthermore, that it is ever unwise to throw big stones, forgetting that the proverb works both ways, and that only those who live in glass houses really fear the hurling of missiles from without.

There are others who will declare it rash to criticise so severely a list of books prepared and authorized by “a body of learned pro-

fessors and long-experienced teachers." I would answer, in the first place, that it was just such "rash criticism" that killed, after a struggle, Defoe's *Plague in London* and DeQuincey's *Flight of the Tartar Tribe*—lights which once adorned this same "college list," books which today hardly an English teacher does not shudder to think of having had to teach. There may be other "plagues" among us. Who knows?

Again, I am not at all certain that the best men to prepare a list of books to study in secondary schools are "a body of learned professors and long-experienced teachers." The fact that the list is the result of scholarly idealism warrants it a practical failure with boys in their teens. For it is a far cry from a university scholar to the heart of a youth; and long experience is a capital school in which to forget the point of view of the boy.

And lastly, these same learned professors, whom we are told we must criticise so gently, I find are far from unanimous in their approval of this "prescribed English." If I had their permission, I might mention the names of three instructors, two in Harvard, who within a year have expressed feelings not a whit less strong than those I am now expressing. Not a month ago one of the faculty of a New England college said at a conference: "If you teachers in the schools didn't get these fellows so down on literature before they get to us, we might do a little something with them." When we explained to him the nature of the books we were obliged to teach, he readily agreed that "no boy could go through such a mill and come out eager for any more of it."

As a matter of fact, the college course in English puts on the boy of seventeen an effectual check to any natural ardor he may have for the literature of his mother-tongue. It is rash to quote from memory, yet I believe it was a year ago before a Connecticut educational convention that President Hadley said he should prefer to have young men come to Yale wholly ignorant of English literature rather than have them come, as many were coming, with a decided prejudice against it. Such a prejudice many others have remarked. And we have no farther to go to find its cause than the books which are used for the study of English in our classical high schools.

The entire matter, after all, rests upon this: what is the aim of

teaching English literature? If our aim is to exercise the pupil's mind and prepare it for other things than reading; if our ideal is to develop quick and accurate thinking in the affairs of life; if we mean to class English literature with Latin, geometry, algebra, and the modern languages, as a subject "to train the mind;" if English is to be a purely intellectual process and mental drill—then we have chosen an admirable set of tools with which to work. Throw aside *The Merchant of Venice*, *Ivanhoe*, and *Silas Marner*, add three works of the type of Macaulay's *Addison*, and we shall have ourselves well equipped to join the ranks of the teachers of Latin and algebra, and march with them toward the same goal.

If, on the other hand, our aim is to cultivate a liking for the best that has ever been written; if we are going to try to form tastes and not train intellects; if our ideal is to lead boys and girls out of darkness into "the sweetness and light" of real literature—then we have chosen blindly and unreasonably. Somebody has blundered. The tastes we now form are just the antitheses of our ideals; and the teaching of English literature becomes a complete failure.

Nevertheless, unsuitable as these books are which we make our pupils study, the gulf between them and voluntary reading might be more often spanned if teachers were a little more sympathetic and liberal with regard to their pupils' tastes. From the positions which they hold, and from the nature of the work they are doing, English teachers are men and women who do enjoy and read literature. Compared with people at large, they are literary personages. As a result they do not know what the voluntary reading of their pupils is. They may collect data and know the names of books they read, but further than that they plead ignorance. How many teachers today could pass an examination on the works of Henty, Alger, Ellis, Castleman, Winfield, or Oliver Optic? How many could relate *Comus* or *Silas Marner*, or *The Vision of Sir Launfal* to the voluntary reading of a girl, who is going to college in two years, and who writes that the two books she enjoyed most in the summer vacation were *The Havoc of a Smile*, by L. B. Walford, and *Poor and Proud; or The Fortunes of Katy Redburn*? Teachers, to be sure, have put away childish things; they have cultivated literary tastes; they are scholarly. Yet I fail to see how they can make any

use of that voluntary reading, no matter what their other tastes are, until they have at least a speaking acquaintance with it; or how they can interest their pupils in what *they* like, until they show them that their teachers are also interested in what *they* like and naturally enjoy.

A teacher of science or mathematics being, as a rule, not a man of literary tastes, often, if not generally, has more reading sympathies with his pupils than does their teacher of English; and, in my mind, there is no doubt that the former, with a little experience, would surpass the latter as a teacher of literature.

Two other mistakes we English teachers are constantly making. From the nature of our work, we become too much prejudiced against the books our boys and girls are reading. The great majority of them are harmless, often even stimulating, stuffed with moral, generally productive of admirable men and women. They are not positively bad. None of them are utterly worthless. They are only the natural food for boys and girls between the ages of thirteen and twenty. And they agree with them remarkably well. Yet I have heard teachers speak of them before their classes as "trash."

Again, we sometimes forget that literature, in reality, is a thing for the few. People, in general, have never had, and never will have, any artistic sense when it comes to style, or that subtle quality which all literature possesses. Not one business man in a hundred today reads Macaulay or Addison—or even Irving. Shakespeare, Scott, Tennyson, and Dickens, in leather bindings, are in many parlors where the daily pabulum is the newspapers, magazines, and recent novels. More rare than an ability to appreciate classical music or the masters of painting is the ability to enjoy intensely pure literature. It is a gift, inborn—rarely an acquired taste. Yet I have known teachers who thought that unless boys and girls liked Milton, and that unless men and women read poetry, they were lost.

The prejudices of English teachers, the simple and crude quality of pupils' reading, above all the literature studied in class—these are the conditions which practically forbid any serious correlation of voluntary reading and classical high-school English. However, we are unwilling to give up; and many of us are striving, with one experiment and another, in spite of the obstacles in our way, to bring such

a relation about. In my own efforts I have worked with two objects in mind; to attack the prescribed classics as though they were one and the same thing as voluntary reading; and to become familiar with the books which my pupils themselves read and enjoy.

In the first place, therefore, as for Macaulay's Essays, or *Macbeth*, or any of the others, we do not study them. We simply read, not by any means every page, not in all parts thoroughly, seldom twice, never as literature *per se*, but as something naturally, as a matter of course, to be enjoyed, as a boy enjoys *Treasure Island*, *Tom Sawyer*, or *Oliver Twist*. Notes, introductions, lists of dates, suggestions for methods of study, sample questions, all the editing of a modern school classic I never ask a normal, sane pupil to read. Summaries, plans, outlines, compulsory memory passages, for the most part, at once put a book into that hateful class of books which a boy calls "dry." Therefore I cannot afford to use them, no matter what the college requirements may be. Every day I repeat to myself the best advice that was ever given me: "Literature is of the spirit and cannot be taught; don't teach, don't preach, don't fall into the routine of grinding. Read, read—inspire interest and hope for the best."

The instant that I see a class making work out of a play of Shakespeare's or *Silas Marner* I know that I have blundered and begin another book. In this way we regularly spend no more than six recitations with *The Ancient Mariner*, ten or twelve with *Julius Caesar*, eight with *The Life of Goldsmith*, never more than ten with *Ivanhoe*, and so on.

The final result of this method I am not prepared to foretell. Certainly of technical, college examination knowledge the boys would have hardly enough to win honors in Cambridge. But what is much more important, a large number of them seem to look back with real pleasure to what was, although they did not always know it at the time, their study of English literature. And what is more essential still, many of them are so far from that prejudice against literature of which President Hadley has spoken, that I can cherish the hope that some of them will later, of their own accord, read more of the same kind. And this hope is infinitely more comforting than an A at Harvard or a B at Yale.

In the second place, I admit frankly to myself that my year of

pedagogical study was time wasted. I realize now that the ideal training for a teacher of English is to spend some time as custodian of the children's department of a large public library. This I have had to discover myself. Now it is too late. And consequently I have had to invent other means by which to keep in touch with what the boys and girls of my classes are reading, that I may talk intelligently when they are eager and able to talk, that I may show interest, just as I want them to show interest. And, after all, how can I expect the one without giving the other? To help me, therefore, I have each pupil keep a book record—a blank book in which he enters all books which he reads out of school by himself or in connection with his English work; the title, author, form, number of pages, and a paragraph of remarks. These book records we use constantly. I collect them, make suggestions, arrange lists of books highly praised to put on the blackboard, and, as far as possible, read them myself. Then pupils write compositions about them, exchange records to read each other's entries, and, above all, draw comparisons wherever possible, between them and the literature we are reading for college. Hardly a period passes without some minutes given to these memoranda; and of all the week these minutes are most heartily enjoyed by pupils and teacher. Certainly, in my mind, there are none more instructive.

All this naturally takes a vast amount of time. My own tastes I often cannot indulge. At times a skim-milk story of Castleman's will be almost nauseating. Today my three volumes of Lamb's *Letters* are standing with leaves uncut. But as the years go on my task will grow easier; and meanwhile I am accumulating a mass of general information, and insight into books that children read, which it seems to me is indispensable if I wish to lead them up to Macaulay and Scott, Tennyson and Shakespeare.

What, now, is the result of these two methods, or rather what ought the result to be when they are thoroughly tried and perfected? For as yet they are in but a rudimentary stage. First of all, the English class ought to be "recreation," not the drill and proverbial training of Latin and Algebra and the rest. It ought to be a place where feelings and tastes can develop, not one more period for intellectual mechanics. It ought to be an hour largely of reading, or discussion

guided by the teacher, of reading which will be both the literature prescribed for college, and the voluntary reading of each pupil, so blended together that the boy hardly sees at the time which is which. Then that dark gulf between the two ought, in a great measure, to cease to exist; and, before you know it, your pupils should be coming to a real liking of the best authors in our language. The bridging of that gulf, however, is a most delicate matter. The boy must be led across it, not driven. Enticing and even coaxing must enter into the process. Compulsory reading of Macaulay we have; but compulsory enjoyment of Macaulay is impossible. A teacher can make no greater blunder than scorning or looking down upon the books that his pupils naturally enjoy. If he does, the gulf between them and literature is certainly widened; for, as someone has said, "half of teaching is sympathy." I should sooner say to a boy that because he did not enjoy *Macbeth* he was certainly damned, than tell him that *Joe, the Indian Killer*, of which he was passionately fond, was "trash."

And yet, with all tact, and in spite of every effort, a gulf will remain. The present conditions, as I said at the beginning, will not allow to any appreciable extent the correlation of which we are speaking. The nature of the classical high-school English is too great an obstacle to be overcome by any device from without. Before we hope for entire success we must remove other "plagues" from our "city of dreadful night."



## VOLUNTARY READING IN THE ENGLISH HIGH SCHOOL

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What the English High School of Providence has to present resembles the crude physics notebook of our pupils—observations heterogeneous, formulæ uncertain, conclusions or inferences scanty and perhaps illogical. More than the classical high school, though perhaps not so much as the elementary school, an English high school is “of the people and for the people.” In its catechism the “chief end” of boy and girl is not college. The small proportion which it sends to college does not influence much the tone of the school or the plans of the teachers. That “chief end” is directly, and not through the college, culture and self-support. To our short-sighted pupils and their parents the aim of culture, which includes our topic today, often seems opposed to the aim of self-support. The influence of our commercial department, too, in spite of its broad-minded management, is against culture. In our school are the girl whose mother cannot read or write in any language; foreigners who never hear intelligible English at home; the stunted little fellow who carries telegrams till midnight; the sleepy boy who was up at half-past four driving a milk-wagon; the delicate girl who is both housekeeper and nursery maid at home; the little chief cook of the family; the boy whose father brings home every night a “yellow journal;” the boy who does not own a single good book; the girls who are receiving from their mother, one by one, for Christmas and birthday gifts, a set of Mary Jane Holmes or of Elsie Dinsmore. Those who go to college from accident and impulse, not from home influence. Our pupils have no inheritance of culture; nor, indeed, does their future promise more than their past.

Except for the small college class and the girls who, after a year and a half or two years of Normal training, become teachers in the ele-

<sup>1</sup> Read at the meeting of the Association of Teachers of English in New England, November, 1904.



mentary schools, our pupils at graduation leave behind the world of study. They are now to deal, not with books, except account-books, but with machines, with customers, with kitchen furniture, fancy work, and chafing-dishes. These conditions the teachers in an English high school accept, and to them fit their expectations and aims. There must be a place for the youth of the rising classes. That place is evidently the English high school. Its work has an interest, a pathos, a reward, and a humor, all its own.

Because our material is what it is, our experiments will seem to the college-preparatory teacher to be on a low plane, just as methods proposed and recorded by them seem to us above our level. At the beginning of each year we spend in our school some time in getting acquainted with our material, a diverting occupation. We give sets of questions like the following: (1) How much time each week do you spend in reading for pleasure? (2) What books have you read during the summer vacation (or during the past year)? Mark with a cross those you like best. (3) What magazines do you read (*a*) usually? (*b*) Sometimes? (4) How much time each day do you spend in reading the new paper?

Of course, we know what sort of answers to expect; but we work better with the facts fresh before us, the answers further our acquaintance with individuals, and they vary, from year to year, enough to justify the repeated investigation. Five or six years ago Mrs. Holmes, Pansy, and E. P. Roe led the third-year lists. They still have followers, and Rosa Carey remains popular, but there is now an excess of recent historical fiction, such as "When Knighthood Was in Flower" and "The Crisis," and of the latest popular book a little behind time, whether it be "Lovey Mary" or "Elizabeth and Her German Garden."

The answers point to a few general conclusions: The second year (among the girls) is the transition from boys' books and boarding-school tales to the aforesaid historical romances. The boys during this year outgrow their adored Henty for Scott, Dumas, Stevenson, and Conan Doyle, if indeed these young business men and ball-players find time for any reading. The girls read more than the boys.

The lists are often encouraging. Almost all of my third-year class this year report some good, rather old, books. Shakespeare,

*Robinson Crusoe*, *Tom Brown*, and *John Halifax*, *Jane Eyre* and *Lorna Doone*, are well distributed; as are books by Miss Austen, George Eliot, Thackeray, Dickens, and Stevenson, Mrs. Stowe, Miss Alcott, Miss Jewett, and Mrs. Wiggin. More interesting than the lists, because less stereotyped, are compositions entitled "My Library," wherein you may be told what books your pupil owns, how she obtained them, which she likes best, whether she has a bookcase of her own or only a shelf in the family bookcase, and whether she dusts them herself. "Books of my Childhood" is a good subject, too, for those who have kept from "the dim past," as they call it—the dingy and torn little volumes. Both lists and compositions awake in the pupil a consciousness in the matter of reading, if not a conscientiousness.

The tastes and habits of our pupils being somewhat clear to us, we formulate to ourselves our aims for these young readers: more reading, but not too much; better books; independence in reading; the library habit and the buying habit.

Most boys and girls are so constituted that when teachers say, "Read *The Rivals*," they do not read it. Some of them have the intention, but carrying it out means keeping the name in mind until they go to the library, finding the name in the card catalogue, and finding the book "in" when they ask for it. Usually, then, as the sole result of this mention in class, the pupil has a vague impression the next time he hears of the book, that he has heard of it before. The impression is clearer if the names of the book and the author are written on the board and copied in notebooks. In most cases that ends the matter; after examination the notebook is discarded. There are instances to the contrary, but discouragingly few. The testimony of teachers indicates that posted lists are consulted by seniors, less by third-year pupils, hardly at all by entering pupils. Lists are probably more effective when the title is followed by a brief characterization or outline of the book, such as a publisher introduces into his advertisement. To my third-year questions this fall I added: "What books have you *ever* read because they were recommended in school?" Only six out of forty-six had none to report. The usual numbers are one, two, and three, occasionally five or six. These include such works as *Ramona*, *The Last Days of Pompeii*, *Waverly*,

*The Abbot*, prose by Holmes, and poetry by Longfellow and Tennyson. "Recommended" probably means, in many of these cases, more than merely mentioned in class. *Ivanhoe* and *Kenilworth*, for instance, are given by many, but when these are not actually required, they are put into the hands of all pupils and recommended in such a way that the reading of them can hardly be called "voluntary."

One of our teachers of first-year English has attained success by accident. Limited as to copies, she furnished the boys of the division with *The Pilot*, and the girls with *The House of the Seven Gables*, letting each section report to the class on its own book. As a result the girls wished to read *The Pilot*, and the boys *The House of the Seven Gables*. Their interest encouraged the teacher to borrow from the public library twenty volumes of Hawthorne and Cooper which are now in lively circulation.

One device I have never found to fail of immediate effect, though it may not aid in forming the habit of the initiative in reading. If I bring in a book to which I wish to introduce the class, read to them one or two wily selections, then offer to lend the book, they all want to borrow it. After I had read aloud the fight between Tom Brown and the slugger, every boy in that second-year class was eager and anxious. I had only one copy, but I lent it; the school now possesses fifty copies. A judicious selection from *Scottish Chiefs*, *Men of Iron*, brought to terms a queer lot of boys who had prided themselves on their indifference to anything I might plan for their entertainment. By a similar judicious display of sample goods I have circulated Lanier's *Knightly Legends* and *The Boys' King Arthur*, Lang's *The Book of Romance*, Kingsley's *Hereward*, and *Westward Ho!* and with more moderate enthusiasm *Marjorie Fleming* and *Rab and His Friends*, *Judith Shakspeare*, *The Autocrat of the Breakfast Table*, and *Old Miracle Plays*; and by the same method I could circulate, I am convinced, whatever fit books I should read from, in far larger numbers than I have time to select or means to provide. We need a public school Carnegie. A book in the hand is worth two in the stack. A school library may increase tenfold the influence of the school upon the pupils' reading—a library with many duplicate copies, a loan library, with a librarian, and

with easy reading in foreign languages, as well as our own. The public library does for us all that it can. On our teachers' "books" we may take out twenty volumes at a time, which we may keep for three months, if they are not called for in the meantime. The library is near the group of high schools, and pupils sent with names of books desired come back with those volumes which happen to be "in." The library has provided itself with many duplicate copies of certain books, suited, however, to the lower schools especially; and any teacher, by sending an order to the purchasing agent of the school board, may have such books delivered by express at the school-house. But upon a city library there are many demands; and many times, with the best efforts of the librarians, who call in for us the books we wish, we cannot for weeks get what we need.

A novel report comes from the Barrington High School. There the pupils from the little town and the surrounding farms, are utterly without the reading habit, except in a pernicious form. Each pupil is required to read ten good books a year, giving proof by writing, first, reviews, and later, outlines. The town library is in the school building, and after school teacher and pupil together select there a book which the pupil will like. This is ideal—the library, the boy, the devoted teacher, and a leisure hour. The influence has extended to the parents; and we are expecting a coterie of Gibbons and Goethes from Barrington.

Better than the school library or public library is a library of one's own. The affection recorded by our pupils for their little collections is touching and cheering. One of my girls says: "Each week my books are dusted carefully. While I am doing this I often open them and read two or three of the first pages of some of them which I have forgotten." Another: "Many pleasant hours have I spent with my book. I think, if I had my choice between a day's pleasure trip and a good book, that I would choose the book." And another: "The pride of my heart is a dear little red-leather *Sketch Book*. The book-mark is always placed so that I can turn at once to the description of the organ in Westminster Abbey. I think that is one of the most beautiful and realistic passages that I have ever read."

Now we should like to add to these small libraries books of our own choosing, to divert the dollars spent on sets of *Elsie* into purer

channels. And here we have a grudge against the free textbooks, otherwise so valuable. In our time we were sure of having bits of standard literature in the readers we had to buy. Nowadays good authors are not inmates of the schoolboy's home; they are only flitting visitors. The only remedy is to persuade pupils or parents to buy these books. This some of us felt so strongly that last year we drew up an appeal to parents. After impartially admitting the convenience of having textbooks free, we pointed out the greater advantage of owning them. We said:

A book once known becomes a friend. If you own the book, you have your friend with you for help and companionship. Parents and teachers may together encourage a boy or girl to collect a library of good books. Believing this, we make the following suggestions:

1. Find out what books your child wants most, and give these books to him for birthday and Christmas gifts.
2. Encourage him to spend his own money for books.
3. Read his books, talk with him about them, and let him read to you.

While the reading of the best new books is not to be discouraged, these old books cost less and become more highly prized as the years go by. They are used in high schools throughout the United States. They make a good foundation for any library.

We were to accompany this letter by lists of books required in our study of English literature, and by lists of supplementary reading. We thought of sending these lists to the booksellers and department stores of the city, so that we could promise the parents the certainty of finding there what we recommended. An experienced normal-school teacher, when consulted, expressed approval of the plan. Then it was read to a lawyer and his wife who had a large family of children in school. "What would you think if you should receive this letter?" I asked. When I had finished it, Mrs. Jones said emphatically: "Well! I should think it *very queer*?" Mr. Jones said nothing, but looked every inch the lawyer. We did not send the circular. We still think the idea practical, if a wording can be invented to express more truly our feelings, which are neither patronizing nor arrogant.

My entering class of girls last year resolved itself, every Friday, into a reading club. Each girl who had read any book during the week reported, telling briefly what it was about and how she liked

it. We all took down in our notebooks the names which I did not veto. Before I dared to pass judgment on some books, I had to borrow them. L. T. Meade's boarding-school girls and Oliver Optic's remarkable young gentlemen were new acquaintances to me. The girls lent their books willingly to me and to their classmates; several good books went the rounds; not a few were sought at the public library with some success; one or two were received by request, as birthday gifts. The club method was effective, but it was on a plane a little too low. We did not work out of the boarding-school stories as entirely as we ought. Still, another class might, of itself, seek a higher level, and the teacher could use more upward pressure. The same plan was tried in a second-year class, but without response. Few read, fewer still reported. The method which succeeds with one class will not succeed with the next, for classes differ in personality as individuals differ. The teacher of English literature must forever experiment. She may not rest on her oars, saying with satisfaction: "At last I have developed a method." She must always feel her way, willing to give up a half-developed scheme, to retract, to change her mind, to invent methods hitherto unheard of, to adopt methods hitherto rejected.

The pupils' answers report an appalling number of fiction magazines. In no way is reading-time so frittered as on the storiottes which give a nourishment as brief and unsubstantial as the steam from the soup kettle. Nor is the magazine habit cured by years, like the Henty and Elsie habits; a humiliating proportion of intelligent American adults read nothing else. The average given in the April leaflet on voluntary reading of four periodicals to a pupil I find rather low than high. Perhaps it is raised by my newsboy who makes the most of his opportunities and reads for nothing several fashion journals before he delivers them to his female customers.

There is a legitimate use of the magazines. Possibly if the best periodicals were available in a school library, and certain valuable articles were brought to the attention, not so much poor fiction would be selected. As to the newspapers, among the answers this year was the following: "My main hold in reading is the newspaper and every interesting account of anything I cut out and save. In later years I propose to have them all united into a scrapbook." The

conclusions of the April leaflet of this association are: "There is not enough reading of the daily newspapers by many," and "there is excessive reading of daily newspapers by some, and unintelligent reading of them by many." Unintelligent the reading no doubt is, but in a third-year division of fifty, about one-third average fifteen minutes daily, one-third half an hour—surprisingly sensible averages. Only five or six read more than that, only one reads not at all. Seven read occasionally. Pupils may be trained to read the newspaper wisely by giving a few minutes of some history recitations to the reporting of current events. This plan may result in a journal or two being brought into the schoolroom, and in a wild scramble on the part of friends and neighbors through its columns. Connection is often visible between current events and the history we are studying. Labor troubles happened as long ago as the Black Death; and when the Archbishop of Canterbury came to Boston, we were glad that we knew how he and not another came to be the head of the English church. One of our Providence papers published one morning lately a comparison of the siege of Port Arthur with those of Carthage, Rome, and Constantinople. Regardless of correlation, I have encouraged items scientific or local; on successful air-ships, color photography, the securing of Boston symphony concerts for our city, the loan exhibit by American artists at our School of Design. This is a course in general information, in "knowing something about everything." Pupils who may not have taken kindly to history are revealed in a new light—wide-awake, mature in judgment, thoughtful, original; for reporting leads often to discussion of a length which would be impossible in a class obliged to cover certain hundreds of pages within certain days. It may be that the course in current events is a privilege peculiar to an English high school.

In unresponsive classes activity may be induced by giving out general topics to individuals or, better, to sections. Half of the room for example, was one day to be prepared on foreign news, the other half on home news. The next day the arrangement was reversed and the stimulus of the harmless rivalry was evident. I confess that I have never yet succeeded in arousing the majority of a class to bringing in items habitually, but those who do not speak, listen. Maps, blackboard diagrams of military positions, general explana-



tions by the teacher, are helpful. It means that I must rise early in the morning and scan the news columns before breakfast, that I may supplement and revise the items reported. Sometimes my items are the only ones, but there is a gradual increase in the number of reporters.

What we must mainly depend upon to develop so strong a liking for good literature that it shall govern voluntary reading, is the regular class study laid down in the daily schedule. It is by the intensive study of masterpieces that the critical faculty is trained for practical use. Every other piece of literature looks different after such a study. Even though it cause some temporary weariness, the permanent result is good. I do not believe that the "double life in things literary" goes on forever, if the class study of good things is at all what it may be. These experiments in voluntary reading are only supplements, to be worked in as time and occasion allow. No college examinations, no precedent, no theories of others or our own, no poverty of material can acquit us, after four years of daily contact in the classroom, for the failure to develop, in most of our pupils, the elementary knowledge of good and evil in things literary, and the embryo passion for the good.

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#### DISCUSSION

Alfred H. Hitchcock, of the Public High School, Hartford, Conn., said; among other things:

1. The increasingly common practice of making the English recitation merely a pleasant hour devoted primarily to discussing cheap favorites has many real dangers. There is, of course, a tendency to aim too high; yet it should be remembered that real enjoyment, real appreciation, rarely comes save through labor. The student of literature, like the student of any other art, must work.
2. To say that with one or two exceptions the present college requirements are absurdly inappropriate is hardly respectful to the college professors and the hundreds of high-school teachers who sanction them. It may take years of experimenting to find the best way of presenting the *Conciliation Speech* and Milton's lyrics; it certainly requires more skill to handle the Milton lyrics than it does to play with the works of G. A. Henty. Not only must pupils work; teachers must work too.



3. Those who recommend the abolishment of the present college requirements, and the substitution of much easier and inferior classics to be studied in a wholly agreeable way, show very little faith in the ability of the average teacher to make his work profitable, and still less faith in the hardihood of the average pupil. A love for literature which can be blighted by the *Conciliation Speech* or the *Essay on Milton* is hardly worth coddling.

I wish to take advantage of this opportunity to submit for consideration a plan for relating voluntary reading to the pupil's individuality.

*What the pupil is asked to do:* (1) Make a list of five topics on which he thinks he or some other member of the class might be able to write entertainingly. (2) Give the titles of five books he has read and is willing to recommend to his mates. (3) Describe, in a single paragraph, one of the books recommended. (4) Write an 800-word composition on one of the topics he has suggested or on one of twenty-five selected by the instructor from all the topics mentioned by the class.

*What the teacher does:* (1) Through studying book list, topic list, book review, and composition, he tries to find the boy—the individual. (2) Having corrected the composition and complimented its good points, he adds a few lines regarding the pupil's reading, if possible praising the list of books submitted, never condemning it in a cutting way, and suggests a few volumes, found in other lists, which may prove enjoyable. (3) To supplement this individual prescription, he gives to the entire class an informal yet serious talk on the dangers of too much promiscuous reading, and calls attention to perhaps twenty good books recommended by various members.

Professor Winter, of Harvard College, chairman of the Committee on the Establishment of Local Conferences for Special Work, made the following report:

This committee offers a report in favor of establishing local sections or conferences for special work.

It is the idea of the committee that such sections, or "shop clubs," serving as rallying centers for teachers, may be a means of accomplishing some definite work, and may, in several ways, be of advantage to the association. They therefore recommend that local sections be formed by members of the association, for systematic work in such subjects as each section may choose; that such members as approve of this and are willing to act, hand in their names, today, to the president of the association; that he choose from this number persons who shall undertake to act as starters or leaders in the localities represented; that these leaders, in the name of the association, invite persons, who may or may not be association members, to become members of these sections or clubs, and that these clubs be con-

ducted, with regular meetings for a given time, with the view to a specific work, and according to a specific plan.

In the case of certain of the subjects suggested, it may be advisable—for securing definite results—that some system of criticism be adopted for the work of each meeting. It is hoped that the possible social features of such meetings, as well as the intellectual fellowship of them, may be additional recommendations.

A report of the results of the undertaking—at the annual meeting—if such sections are formed, is regarded as desirable. The interest of the committee has been directed especially to the subject of oral reading. They wish strongly to emphasize their belief in the value of oral work in connection with the teaching of English. They believe that this work, done in this connection, is the best means of teaching English speech, and that it contributes materially, in ways that are well understood, to effective instruction in written English. The question is seriously raised as to whether substantially all the energy and means now given to occasional—oftentimes harmful—exercises in declamation, might not better be devoted to systematic instruction, by simple and natural methods, in oral English, alongside the instruction in written English.

The committee, therefore, especially recommends, as possibly a step in increasing interest in this subject, the formation of local sections for oral reading. As a help to this end, a program has been drawn up, and printed in the form of an association leaflet, intended as a suggestion for some effective scheme of work.

[After luncheon, Professor Winter explained this program with demonstrative readings to an interested audience. Over fifty members of the association have volunteered for active service in local sections, and “starters” have been appointed in Boston, Worcester, Framingham.]

## EDITORIAL NOTES

GEORGE HERBERT LOCKE

*THE HIGH SCHOOLS  
OF CHICAGO  
IN 1903*

The report of Mr. E. G. Cooley, superintendent of schools for Chicago, is full of very interesting reading for the men who are at work in the various departments of educational endeavor. The subject in which the readers of this journal are particularly interested is, of course, that of secondary education, and we think the news of what has been accomplished during the last year in the city of Chicago will be of very decided interest. It is rather encouraging to read that arithmetic has been taught along with mathematics, and systematic work in English grammar along with languages. We speak of it as encouraging, because too often this much-needed work is passed over for the sake of what is termed "advanced study" in these departments. There is of course, an element of discouragement in the necessity for having these subjects taught in the high school when they have formed, presumably, such a large part of the curriculum of the elementary school. Possibly it is because arithmetic has been taught so much that we turn out poor arithmeticians. So many of our books are made on the principle that one learns to do by doing. This is a pernicious doctrine, for with the decrease of interest comes increase in carelessness. Almost the same that is said of arithmetic may be, with truth, said of English grammar; the formality of it having destroyed the interest.

It is reported that the work in commercial subjects has increased in interest and in the number taken. That might be expected in a city like Chicago, and we hope that the following sentence from Mr. Cooley's report is true, where he says that "students and teachers are looking with greater respect upon this branch of high-school work." The report goes on to say that the work in English and in physical geography has been greatly strengthened. A special plea is made for laboratories in which to teach well the latter subject. It is treated in these high schools as an introduction to the sciences, and Mr. Cooley very aptly remarks that it ought to be specially well taught, in view of the fact that so many students leave school at the end of the first or second year. One can see some of the indications of Mr. Cooley's success as an organizer in the very businesslike statement of his that it is not a wise business proposition to spend \$10,000 or \$15,000 in fitting up a magnificent laboratory for the third- or fourth-year high-school work in physics or chemistry, while the classes in physical geography, which are three or four times as large, have to confine their efforts to the mastery of a textbook. We confess that this seems a very striking argument, and if Mr. Cooley is successful in obtaining first-class laboratories for this attract-

ive subject, we have no doubt that the number of students who remain in school past the second year will be largely increased. It is not so much a desire on the part of boys and girls to be in business or making money that takes most of them away from school at the end of the first or second year, but rather a distaste for the very formal studies which too often form the curriculum of these years. We know, for instance, of some high schools where in the first year the subjects of study are algebra, physiology (with special reference to the effects of alcohol and narcotics upon the human system), rhetoric, and Latin or German. Now all these subjects are taught from the technical point of view, and the result of a year's work of this kind upon the normal boy is that he wants to go anywhere but to school. One can hardly blame him for such a desire.

Mr Cooley offers a very interesting suggestion when he states his desire that high-school teachers should become more interested in the work of the first year. He recognizes that perhaps they may be ambitious to teach in higher grades, but he looks upon such a tendency as mischievous. One way of preserving the right attitude toward this work is, as he says, a recognition that the work in the various grades of the high school is of equal value and should be recognized as such in the matter of salaries. It is a very striking thing in the history of education how the organization has provided for an increase of salary with an increase of grade. This is, of course, a logical way of organizing the school system, but cannot be defended on educational grounds. The idea that teaching pupils of the eleventh grade is more difficult than teaching pupils of the tenth grade is utterly absurd, and yet our three divisions of education—elementary, secondary, and college—have been organized on this basis. It is very true, as Mr. Cooley says, that if we place our best teachers of the high school in the first and second years, a far smaller number of students will drop out of school at the end of the first year. The teachers we want for these first years are those who are enthusiastic in their work and can inspire the students. We have met a number of high-school principals who, having but a little time for teaching, devote that time to the graduating class. On inquiry as to why this was done, we were told that these principals wished to influence the life and conduct of the graduating pupils so that when they went out into the world they might be better equipped to understand the world and deal with its problems. This, of course, is a very laudable ambition, but it seems to us that it would be much better if the principal taught the first-year students and tried to develop their characters at that early and critical time. Then the principal would have time, during some years, to see whether he was a success in this effort of his, and to supplement and suggest in many ways things that would help these students in the subsequent years when they are still under his control. We hope that very many high-school principals do teach the first-year pupils, and we cannot see how any man at the head of a school can afford to ignore these persons who are entering upon this entirely new life. We hear very much about the gap or chasm separating the high school from the elementary school, and much of what we hear is founded upon theory, if not upon imagination. The best way to bring these two parts of our public-

school system together is through social intercourse and a larger mutual understanding. This has been tried in Chicago after this fashion: High-school principals have visited the elementary schools, holding meetings of elementary principals and teachers and eighth-grade pupils in order to interest them in the work of the high school. On the other hand, elementary principals have visited the high schools and have tried to become better acquainted with what is before their pupils who enter there. A committee of about twenty principals of the high and elementary schools have been at work during the past year trying to bring about better relations between the high and elementary schools, and their published report contains suggestions of great value. Each one of the twelve committees which Mr. Cooley has organized, and which are working on the various subjects in the curriculum, includes principals of high and elementary schools, and most of the committees are undertaking the study of the entire twelve grades, taken as a whole. Mr. Cooley hopes that this will give unity of effort to the work of the schools and bring about an increase in the spirit of sympathy and co-operation that is necessary to effective work.

There are fifteen high schools in the city, the smallest of which has an average daily membership of 224, and the largest of 1,476. The membership of all the schools is about 9,500, and the number of graduates last year was about 1,300. The cost of these schools was \$53.79 per capita upon the number enrolled. This, of course, is increased slightly in the English High and Manual Training School, where the cost is about \$77. This has been a year of decided progress in the schools of Chicago.

Under this title we published in November a statement of some of the prominent features of the act that was recently passed by the state legislature of Ohio, by which the educational work of the state was greatly changed in its organization and administration. We presumed that we were in possession of the facts, as we had taken them from one of the most reputable of our weekly journals, but letters from some of the prominent educational officials of the state have been received complaining that the case for the act did not receive just treatment. That our readers may have the full statement from the Ohio standpoint, we shall publish a full account of the act and its significance in our next issue.

There is nothing so significant in England at the present time as the increasing interest in secondary education. The Education Act, the discussion of which has heretofore been colored by religious controversy, is now being recognized as a decided aid to this much neglected part of the educational system, and the placing of responsibility upon the local authorities instead of on the government has aroused definite interest in the local situation. The London County Council has just published an elaborate scheme by which it is proposed to select annually between two thousand and three thousand of the ablest children of the ages of

THE  
EXTRAORDINARY  
EDUCATION ACT OF  
THE STATE OF OHIO

SECONDARY  
EDUCATION IN  
LONDON

eleven or twelve in the London elementary schools as junior county scholars. Each child will receive free education in a secondary school till the age of fourteen, when the scholarship may be renewed for two more years. Money payments may also be made, under a separate system, to those who require it. From such scholarships the scholar may advance by intermediate and senior scholarships to a university education.

The message of Governor Higgins contains a very interesting sketch of the progress made in education in New York during the past ten years. He says that the new organization which provided for the unification of the system is now in good working order, and that the unfortunate controversies which existed under the dual system have been "happily terminated."

THE PROGRESS OF  
EDUCATION IN THE  
STATE OF  
NEW YORK

Ten years ago there were 11,778 school districts, employing 25,414 teachers and registering 1,083,228 pupils. The average daily attendance of these pupils was 668,097, and the expense of maintaining the schools was \$18,921,246.

According to the last complete report, there are 11,726 school districts—a decrease of 52; 34,453 teachers employed—an increase of 9,039; 1,256,874 pupils registered—an increase of 173,646; a daily average attendance of 928,335—an increase of 240,238; a total expenditure for school purposes of \$41,418,096—an increase of \$22,496,850.

Ten years ago the state paid toward maintaining these schools, exclusive of aid given to high schools, \$3,712,352. Under the last apportionment state aid amounted to \$3,970,555—an increase of \$258,203. From these two groups of figures it appears that the aid given by the state to the schools has not kept pace with the growth of the schools. Ten years ago it amounted to \$3.43 per pupil; the last report shows that it amounted to \$3.16 per pupil, or a decrease of 27 cents per pupil.

Included in the above figures for ten years ago were 285 high schools maintained at an expense of \$1,698,860. These schools employed 1,159 teachers and registered 29,668 pupils. The last report shows 636 high schools—an increase of 351; 3,506 teachers—an increase of 2,348; 81,108 pupils—an increase of 51,440; amount expended, \$5,007,055—an increase of \$3,308,195. The state aid given to high schools ten years ago amounted to \$78,897; the amount so apportioned in the last report is \$290,025, an increase of \$211,128, or about 267 per cent.

Ten years ago the state rendered aid to the public high schools to the extent of \$2.66 per pupil; last year this amount was \$3.58, an increase of 92 cents per pupil.

Ten years ago there were 93 colleges in the state, employing faculties numbering 2,212 members and instructing 21,833 students, with an expenditure of \$4,792,987. The last report shows 119 colleges—an increase of 26; 3,871 members of the faculty—an increase of 1,659; 39,718 students—an increase of 17,885, and expenditures amounting to \$10,061,269—an increase of \$5,268,282.

Ten years ago there were 125 private academies, employing 1,031 teachers, instructing 12,131 pupils, with an expenditure of \$1,141,422. The last report shows 144 private academies—an increase of 19; employing 1,288 teachers—an increase of 257; instructing 13,988 pupils—an increase of 1,857; expending therefor \$2,099,945—an increase of \$958,523. The state aid given these private academies ten years ago amounted to \$17,956. The amount so apportioned in the last report was \$22,332—an increase of \$4,374.

## BOOK REVIEWS

*The Teaching of Biology.* By F. E. LLOYD AND M. A. BIGELOW. New York: Longmans, Green & Co. Pp. 491.

The book which is the subject of this review and Professor Ganong's *Teaching Botanist*, published in 1899, together represent the most extended and successful attempts at giving a full statement of the educational bearings of biology in the secondary schools. The *Teaching Botanist* has been and will continue to be a potent factor in presenting the opportunities and claims of biology. The new book mentioned is somewhat more pretentious in the topics treated in botany, and treats the field of zoölogy as well. The philosophical and practical discussions are so excellent that one can but wish that the teaching force of biology as a whole could appreciate and utilize them. They represent in a fairly complete way ideas as to the fundamentals of biological teaching, as those ideas are held by many of the most successful teachers of the subject. As has often been true concerning the statement of position of the advance guard, some time will be needed before all can come to appreciate this position. We are not likely to overestimate the value of such a statement, however, since, on the one hand, it helps greatly to remove real and supposed differences between those who are seeking to discover the proper tenets of the work in biology, and, on the other hand, offers definite and acceptable leadership to the larger number of teachers who expect to have prepared for them a statement of these things. Teachers of either class just mentioned can ill afford not to give this book a careful reading, and if such reading is done in anything like a general way, the book will be the means of giving quite an uplift to biological teaching. From this it does not follow that all teachers will be in entire agreement with all the ideas brought forth, but such is not essential to derivation of large benefits.

The first and second chapters in the first part by Professor Lloyd, and the fourth and twelfth chapters in the second part by Professor Bigelow, are upon the following topics, respectively: "The Value of Science, and Particularly of Biology, in Education," "Nature Study," "Animal Nature Study and Human Physiology in the Elementary School," and "The Teaching of Human Physiology in the Secondary Schools." Outside of these chapters each author's presentation may be organized in a general way under the three following heads: the values to accrue from a study of the subject in secondary schools, the principles that shall determine the organization of the course, and the outline of the course itself.

Concerning the first and second of these divisions, and the plan of the third, there is essential agreement on the part of the authors, though disagreement appears in some points. The primary benefit to be derived from biological study is not an æsthetic one, though æsthetic values do result. "The teacher of botany is not concerned with æsthetics," says the first author; while the second says: "The æsthetic value is, I believe, not secondary in its importance in education, but equal to those which I have grouped under 'practical' and 'intellectual.'" Neither author, however, would seek directly to obtain æsthetic values, and both recognize that such are valuable corol-



laries. It is recognized "that a more searching examination and better understanding of the significance of plants and their business will lead to richer fields of intellectual and emotional delights; and that a fuller knowledge of these organisms and their ways will furnish vastly more material for the play of the aesthetic imagination." A definite stand is taken against that sentimentalism which has often appeared in our books and more often in our practice, and which has been an adequate cause for the patronization we have sometimes received at the hands of our friends. Other values receiving full and justified indorsement are: the peculiar and unsurpassed advantages of both botany and zoölogy as disciplinary subjects; the informational content; utilitarian features of biological processes and their results; interest in and appreciation of living things; biological knowledge as a basis for further thought concerning evolution, and also as a basis for proper interpretation of certain sociological problems.

In determining the things that shall organize the course in botany or zoölogy there must be recognition of the present status of the subjects as actually taught in the high schools and also in the grades. "The formulation of an optimum standard is, however, one thing, and its general acceptance in the fullest sense another." Should we grant that teaching force and pupil's ability are practically uniform the country over (things far from being true), we should still find it necessary to vary our courses to suit different localities and conditions. Teachers' opinions vary widely and will continue to do so. In the experience of the reviewer, two teachers from large cities independently criticised the same outline in a laboratory guide. One said that the outline should have been omitted, since the work should have been done in the grades. The other said that in order to meet his needs more work of the kind in greater detail should have been introduced. It is not possible, therefore, for anyone to outline a single course that shall be adequate for the needs of all, or indeed for those of any large proportion of the pupils who are to study the subject. There are certain general principles that should be operative in determining the organization of the course. The course should be for the masses and not for those few who are to go to college, most assuredly not for those who may continue this work in college. Professor Bigelow suggests, as the best plan at present, a year's course consisting of one-half year of each subject. After discussing this course, he says: "All this, however, is merely suggesting a temporary compromise looking forward to the time when a unified course in biology will make it unnecessary and quite undesirable to draw any line between botany and zoölogy, as the present arrangement of separate textbooks and guides now practically requires in most high schools." Following this statement, and in answer to the objection that such a course would not meet college-entrance requirements, it is suggested that there be further courses in botany and zoölogy elective in the fourth year to those who expect to go to college. Such a plan was recently adopted by the high schools of Greater New York. Concerning the efficacy of this proposed arrangement of the work many will have important objections. It should be said, also, in this connection that any course that is best for the masses of high-school pupils should be accepted as an entrance requirement by the colleges.

Further considerations determining the organization of the course will be found by deciding what things will best realize the values mentioned above. What topics and what treatment will best develop intellectual power, give the best quality of information concerning plants and animals as living things and as related to our needs, and will best produce interest, happiness, and high ethical life. These things involve inclusion

of the various divisions of the subject arranged as a synthetic unit. Most teachers will welcome the clear stand taken with reference to the relative importance of these different phases of both botany and zoölogy, as stated for zoölogy by Professor Bigelow in the following: "The study of anatomy, gross and microscopical, is obviously the foundation for that of all other phases of zoölogy; for classification, physiology, embryology, and ecology rest upon a basis of structure." Of course, no teacher really conversant with his problem would teach morphology without constantly asking for interpretations in terms of function.

Preceding the course itself there is considerable discussion of the "type study" and so-called "logical" course, it being concluded that the difficulties of beginning with the lowest forms are such as to make it undesirable to do so. The courses that follow are essentially the same as have appeared elsewhere. The one for botany was published in *School Science* in May, 1902, as the Report of the Committee on a College Entrance Option in Botany, the committee having been appointed by the Society for Plant Morphology and Physiology. The course in zoölogy appeared in the *Teachers College Record*, Vol. II, No. 1, January, 1901. A review of these courses is unnecessary.

Each chapter of the book is accompanied by an excellent classified bibliography. Frequent footnote citations add authority to the statements made, and many other elements of excellence that cannot be included in a review assist in making the book indispensable to teachers of biology everywhere.

OTIS W. CALDWELL.

STATE NORMAL SCHOOL,  
Charleston, Ill.

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*A Modern School.* By PAUL H. HANUS. New York: The Macmillan Co.  
Pp. viii + 306.

One of the best methods of contributing to educational progress is a thorough examination and careful interpretation of tendencies in actual school work. A second method is that of setting forth in a constructive way guiding principles based on philosophical considerations and scientific experiment. Of the latter, Professor Dewey is probably the leading representative; of the former, Professor Hanus. Probably no man has a keener insight into educational tendencies, on the practical side, than Professor Hanus. The first chapter of the author's *Educational Aims and Educational Values* emphasizes that "preparation for complete living" calls for an active participation in the activities of life now. The present volume aims at a further development of his theme on the practical side. The demands of both society and the individual must be met. "A modern school can meet the legitimate demands of society only by adapting its aims, means, and methods to the changing needs of a progressive civilization." The emphasis is upon the practical, but the demands of the individual in his personal development are met by substituting for the general culture of earlier times a modern one. No one who carefully reads the signs of the times can fail to feel the demand that, to fulfil its function, the school must continually formulate new aims and use new methods. To point out these is the author's real contribution.

This volume consists of nine chapters which have appeared, in part or entire, as articles in six magazines. Chap. 1, under the title of the book, sets forth the central theme—the function of a modern secondary school. The modern school comprises

three aims: culture, vocational, social. General culture is no longer limited to that gained by a study of the classics and mathematics. It is rather "the capacity to understand, appreciate, and react on the resources and problems of modern civilization." Vocational aims call for a beginning in the training for the vocation of one's taste and qualification. Social aims demand an introduction to our institutional life. To accomplish these aims the course of study must be more comprehensive—requiring six years for its completion—and much more flexible, calling for a liberal but wise use of electives. The next three chapters—"Academy and Public High School," "Two Contemporary Problems in Education," and "A Six Years' High School Program"—show how this comprehensive and flexible program began with the advance upon the early Latin grammar school made by the academy in its effort to meet the demands of the new conditions; how the elective system and a close articulation of the high school with the lower grades are needed to meet present demands; and how, in a six-year high-school course, all this can be accomplished.

These four chapters point out very clearly the present tendency in secondary education. In this treatment of practical problems Professor Hanus holds rigidly to the aim of education which he has formulated. Many men, in discussing such topics as the course of study, the elective system, articulation between the grades, etc., do so under guidance of local conditions, special considerations, or personal whims, instead of under the direction of a definite fundamental principle. No such criticism can be made upon these essays.

The other five chapters treat of the following topics: "The School and the Home," "Our Faith in Education," "Obstacles to Educational Progress," "Education as a University Study," "Testimony on the Elective System." It must be said that these do not bear directly on the theme suggested at the outset, in spite of the fact that in the preface the author does attempt to find such connection. Chaps. 5 and 6 cover a wide range of topics; for example, school and personal hygiene, the elective system, contributions to education by the lay public, the kindergarten in relation to the past and future life of the child, evolution of the elementary school program and its present congested condition, evening and technical schools, etc. Chap. 7 rightly emphasizes the need of more united effort in the attempt to solve educational problems. Chaps. 8 and 9 consider topics akin to those presented in two chapters in "Educational Aims." It is clear that all of these are important problems and merit the attention given them. To the reviewer, however, they do not seem essential in the development of the theme in the first four chapters.

In these essays, as magazine articles, Professor Hanus has contributed much to educational progress, thus whipping into line those who are negligent in their attitude toward vital educational problems. It must be said, however, that nine magazine articles brought together do not make a book. More than one-half of this volume does not contribute directly to the topic in hand. Such an aggregate of articles also involves many repetitions of thought. For example, the elective system is considered in "Two Contemporary Problems in Education," again in "The School and Home," and once more in the last chapter. All of these repeat or supplement chap. 2 in the author's earlier work. The first chapter of the book is taken almost wholly from three chapters in "Educational Aims and Educational Values"—many paragraphs verbatim. True it is, teachers and students of education need to have the importance of these educational problems emphasized by repetition and presentation from different points

of view. This may well be done in magazine articles. But until these varied contributions have developed a unified central theme, they might better remain as articles, or be collected in a volume entitled *Educational Essays*.

In spite of these repetitions and the apparent disconnectedness in this volume, all such contributions are most welcome in whatever form they are presented, because Professor Hanus speaks in a practical way and strictly to the point.

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